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Subsistence Harvests of Pacific Halibut in Alaska, 2010

Public Review Draft, 15 November, 2011

by

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and

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November 2011

Alaska Department of Fish and Game **Division of Subsistence**

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Weights and measures (metric)

centimeter	cm
deciliter	dL
gram	g
hectare	ha
kilogram	kg
kilometer	km
liter	L
meter	m
milliliter	mL
millimeter	mm

Weights and measures (English)

cubic feet per second	ft^3/s
foot	ft
gallon	gal
inch	in
mile	mi
nautical mile	nmi
ounce	oz
pound	lb
quart	qt
yard	yd

Time and temperature

day	d
degrees Celsius	°C
degrees Fahrenheit	°F
degrees kelvin	K
hour	h
minute	min
second	s

Physics and chemistry

all atomic symbols

alternating current	AC
ampere	A
calorie	cal
direct current	DC
hertz	Hz
horsepower	hp
hydrogen ion activity (negative log of)	pH
parts per million	ppm
parts per thousand	ppt, ‰
volts	V
watts	W

General

all commonly-accepted abbreviations; e.g., Mr., Mrs., AM, PM, etc.

all commonly-accepted professional titles; e.g., Dr., Ph.D., R.N., etc.

Alaska Administrative Code	AAC
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corporate suffixes:	
Company	Co.
Corporation	Corp.
Incorporated	Inc.
Limited	Ltd.
District of Columbia	D.C.
et alii (and others)	et al.
et cetera (and so forth)	etc.
exempli gratia (for example)	e.g.
Federal Information Code	FIC
id est (that is)	i.e.
latitude or longitude	lat. or long.
monetary symbols (U.S.)	$, ¢
months (tables and figures):	first three letters (Jan,...,Dec)
registered trademark	®
trademark	™
United States (adjective)	U.S.
United States of America (noun)	USA
U.S.C.	United States Code
U.S. state	use two-letter abbreviations (e.g., AK, WA)

Measures (fisheries)

fork length	FL
mideye-to-fork	MEF
mideye-to-tail-fork	METF
standard length	SL
total length	TL

Mathematics, statistics

all standard mathematical signs, symbols and abbreviations

alternate hypothesis	H_A
approximately	~
base of natural logarithm	*e*
catch per unit effort	CPUE
coefficient of variation	CV
common test statistics	(F, t, χ^2, etc.)
confidence interval	CI
correlation coefficient (multiple)	R
correlation coefficient (simple)	r
covariance	cov
degree (angular)	°
degrees of freedom	df
expected value	E
greater than	>
greater than or equal to	≥
harvest per unit effort	HPUE
less than	<
less than or equal to	≤
logarithm (natural)	ln
logarithm (base 10)	log
logarithm (specify base)	log_2, etc.
mean	$\bar{x}$
minute (angular)	'
not significant	NS
null hypothesis	H_O
percent	%
plus or minus	±
population size	N
probability	P
sample size	n
second (angular)	"
standard deviation	σ or s
standard error (of the mean)	$s\,\bar{x}$
type I error probability	P_a
type II error probability	P_b
variance	σ^2 or s^2

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ABSTRACT

This report describes the results of the eighth annual project to estimate the subsistence harvest of Pacific halibut *Hippoglossus stenolepis* in Alaska since the National Marine Fisheries Service adopted rules governing subsistence halibut fishing in 2003. Data were collected through a voluntary survey mailed to all holders of Subsistence Halibut Registration Certificates (SHARCs). The survey response rate was 61% (6,670 surveyed of 10,953 SHARC holders.). An estimated 4,991 individuals participated in the subsistence fishery for halibut in 2010, compared to 5,296 in 2009; 5,303 in 2008; 5,933 in 2007; 5,909 in 2006; 5,621 in 2005; 5,984 in 2004; and 4,942 in 2003. The estimated harvest in 2010 was 43,332 halibut, comprising 797,560 lb (net weight) (±3.4%), the lowest totals for the 8 years of the project. This compares to a high of 55,875 fish (1,178,222 lb, ± 3.0%) in 2005 and a previous low of 43,926 fish (1,041,330 lb, ±3.9%) in 2003. Of the total subsistence halibut harvested in 2010, 77% were harvested with setline gear and 23% with hand-operated gear. As in 2003–2009, the largest portion of the Alaska subsistence halibut harvest in 2010 occurred in Regulatory Area 2C (Southeast Alaska), 53%, followed by Area 3A (Southcentral Alaska), 39%. Subsistence harvests represented about 1.3% of the total halibut removals in Alaska in 2010. The harvest estimates based on the surveys for 2003–2010 serve as a basis for understanding the overall harvest, annual variability in catch, and whether any increase in harvest may be associated with implementation of the 2003 regulations. The report recommends that monitoring of the subsistence harvest of halibut in Alaska be continued.

Key words: Pacific halibut, *Hippoglossus stenolepis*, subsistence harvests, Alaska, rockfish, *Sebastes*, lingcod, *Ophiodon elongatus.*

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EXECUTIVE SUMMARY

This report presents findings of a project designed to estimate the subsistence harvest of Pacific halibut *Hippoglossus stenolepis* in Alaska in 2010. The Alaska Department of Fish and Game (ADF&G) Division of Subsistence conducted the project under National Oceanic and Atmospheric Administration (NOAA) award number NA07NMF4370170 from the U.S. Department of Commerce, NOAA National Marine Fisheries Service (NMFS). In May 2003, NMFS published federal regulations implementing a subsistence halibut fishery in Alaska for qualified individuals who are residents of 118 rural communities or members of 123 Alaska Native tribes with traditional uses of halibut. The year 2010 was the eighth in which subsistence halibut fishing took place under these regulations. Subsistence fishers are required to obtain a Subsistence Halibut Registration Certificate (SHARC) from NMFS before fishing. During 2010, 10,953 individuals held SHARCs, compared to a high of 15,047 at the end of 2007 and a previous low of 11,565 at the end of 2008 (Table 19). The number of valid SHARCs in 2010 was 17% below the previous 7-year average.

Harvest information was collected by means of a postal (mailed) survey. The one-page survey form was mailed to all SHARC holders in early 2011, with one follow-up mailing. Household visits supplemented the mailings in 4 communities in southeast Alaska. In total, 6,670 surveys were returned, a response rate of 61%. Participation in the survey was voluntary.

According to the project findings, an estimated 4,991 individuals participated in the subsistence halibut fishery in 2010, compared to an estimated high of 5,933 in 2007 and a low of 4,942 in 2003 (Table 19).

The estimated harvest in 2010 was 43,332 halibut (±7.8%) comprising 797,560 lb (net weight) (±3.4%), the lowest totals for the 8 years of the project. ("Net weight" is 75% of "round" or live weight; the estimated harvest was 1,139,371 lb round weight.) This compares to an estimated high of 55,875 fish (±3.0%) comprising 1,178,222 lb (±3.0%) in 2005 and a previous low of 43,926 halibut comprising 1,041,330 lb (±3.9%) in 2003 (Table 19). As measured in pounds, the 2010 harvest was about 7% lower than the estimated harvest in 2009, and 24% lower than the previous 7-year average from 2003–2009.

Of the total subsistence halibut harvest in 2010, 610,992 lb (77%) were harvested with setline (stationary) gear (i.e., longlines, or "skates") and 186,567 lb (23%) were harvested with hand-operated gear (i.e., rod and reel or handline). This was similar to the harvest by gear type in 2003–2009. Of those subsistence fishers using setline gear in 2010, the most (40%) usually fished with 30 hooks, the maximum number allowed by regulation in all areas except areas 4C, 4D, and 4E, where regulations establish no hook limit.

Subsistence fishers also harvested an estimated 12,851 rockfish *Sebastes* spp. and 2,864 lingcod *Ophiodon elongatus* in 2010 while fishing for halibut. This compares to estimated high harvests of 19,001 rockfish and 4,407 lingcod in 2004 and low harvests of 12,395 rockfish and 2,355 lingcod in 2005 (Table 19).

Based upon fishing locations, the largest portion of the Alaska subsistence halibut harvest in 2010 occurred in Regulatory Area 2C (Southeast Alaska), 53% (424,818 lb); followed by:

- Area 3A (Southcentral Alaska), 39% (312,650 lb);
- Area 3B (Alaska Peninsula), 3% (23,009 lb);
- Area 4A (Eastern Aleutian Islands), 2% (14,548 lb);
- Area 4C (Pribilof Islands), 1% (10,859 lb);
- Area 4E (East Bering Sea Coast), 1% (10,055 lb);
- Area 4D (Central Bering Sea), less than 1% (1,171 lb); and
- Area 4B (Western Aleutian Islands), less than 1% (450 lb).

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In 2003–2009 as well, Area 2C and Area 3A accounted for over 85% of the subsistence halibut harvests. The proportion of the statewide subsistence halibut harvest occurring in Area 2C has ranged from an estimated high of 60% in 2003 to an estimated low of 51% in 2006 and 2007 (Table 7). Correspondingly, the portion occurring in Area 3A has ranged from an estimated high of 39% in 2010 to an estimated low of 27% in 2003 (Table 7.).

Preliminary data from the International Pacific Halibut Commission (IPHC) combined with the findings of this project indicate that 63.773 million pounds (net weight) of halibut were removed from Alaska waters in 2010. Of this total, the subsistence harvest accounted for 1.3%. Commercial harvests took 66.8% of the halibut, followed by bycatch in other commercial fisheries (15.4%), sport harvests (12.1%), and wastage in the commercial fishery (4.5%).

This report describes the results of the eighth annual project to estimate the subsistence halibut harvest in Alaska since NMFS adopted rules governing subsistence halibut fishing in May 2003. The harvest estimates based on the SHARC surveys for the 2003–2010 fishing seasons serve as a basis for understanding the overall harvest, annual variability in catch, and whether any increase in harvest may be associated with implementation of the new regulations. Demonstrating changes in the magnitude of the Alaska subsistence halibut harvest resulting from the new regulations using the results of the SHARC surveys for 2003–2010 is problematic, however, because of the limitations of earlier harvest estimates at the statewide level. The subsistence harvest estimates for 2003–2010 for some of the larger communities, such as Sitka, Petersburg, and Kodiak, which account for the majority of the harvest, are within the range of harvest estimates based on household surveys prior to the new regulations. The higher overall harvest estimates for 2004–2006 compared to 2003 may be due to more thorough registration of subsistence fishers, hence better harvest documentation. The lower total harvest in net pounds in 2008, 2009, and 2010 compared to the previous 5 years appears to be the result of fewer registered SHARC holders, fewer estimated participants in the fishery, lower average harvests per fisher, and a decline in the average size of the harvested halibut over the 8 years of the study, from 23.7 pounds per fish in 2003 to 18.2 lb per fish in 2008, 19.0 lb per fish in 2009, and 18.4 lb per fish in 2010. Additional years of harvest data will be necessary to shed light on these and other factors that may shape the subsistence halibut harvest in Alaska.

The report concludes that 797,560 net pounds is a sound estimate of the Alaska subsistence halibut harvest in 2010. The estimate is based upon a scientific sampling of SHARC holders and a relatively high response rate. The total estimated harvest falls below the 1.5 million net pounds estimated for the subsistence harvest when the current regulations were developed by the North Pacific Fishery Management Council (see http://www.fakr.noaa.gov/frules/70fr16742.pdf, page 16748). Although the 2010 harvest estimate was 24% below the average for the previous 7 project years, there are no certain trends in the harvest. The report recommends that monitoring of the subsistence halibut harvest in Alaska continue so that trends in the fishery in terms of participation, location of harvests, and harvest quantities can be better understood.

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CHAPTER 1: BACKGROUND AND METHODS

BACKGROUND

The primary goal of this project was to estimate the subsistence harvests of Pacific halibut *Hippoglossus stenolepis* in Alaska in 2010 through a survey mailed to registered subsistence halibut fishers; the survey was supplemented by interviews in selected communities. This was the eighth year for which this research was conducted. (See Fall et al. 2004 for the results for 2003, Fall et al. 2005 for the results for 2004, Fall et al. 2006 for the results for 2005, Fall et al. 2007 for the results for 2006, Fall and Koster 2008 for the results for 2007, Fall and Koster 2010for the results for 2008, and Fall and Koster 2011 for the results for 2009.) The Division of Subsistence administered the project through a grant from NMFS (award number NA07NMF4370170).

In Alaska's coastal areas, subsistence halibut fisheries are local, noncommercial, customary and traditional food fisheries, as noted by Wolfe (2002) and described in *Environmental Assessment/Regulatory Impact Review/Initial Regulatory Flexibility Analysis for a Regulatory Amendment for Defining a Halibut Subsistence Fishery Category* (an "EA/RIR/IRFA") by the North Pacific Fishery Management Council (NPFMC), ADF&G, IPHC, and NMFS, August 11, 2000 (NMFS 2000; see also NPFMC 2003). The EA/RIR/IRFA summarizes information about the subsistence halibut fishery in Alaska. This background information is not repeated here but provided the basis for the NPFMC's recommendation for subsistence halibut fishing regulations in Alaska. Figure 1 illustrates International Pacific Halibut Commission (IPHC) halibut regulatory areas in Alaska.

In April 2003, the National Marine Fisheries Service, Alaska Region, published federal regulations implementing a subsistence halibut fishery for qualified individuals in the waters in and off Alaska (68 FR 18145, April 15, 2003) (see http://www.fakr.noaa.gov/frules/fr18145.pdf). Current regulations state that persons eligible to subsistence halibut fish include 1) residents of rural communities with customary and traditional uses of halibut (rural); and 2) members of federally recognized Alaska Native tribes with customary and traditional uses of halibut (tribal). In total, residents of 118 rural communities and members of 123 Alaska Native tribes are eligible to participate in the fishery.[1] (See Appendix A for a list of eligible tribes and communities as they appeared in the Federal Register in 2003.) On November 4, 2009, the U.S. Department of Commerce published a final rule (74 FR 57105, November 4, 2009), effective December 4, 2009, modifying eligibility requirements for participation in the Alaska subsistence halibut fishery. The action allowed rural residents who live outside the boundaries of the specified 118 communities to participate if they live within the boundaries of rural areas defined in §300.65(g)(3).

Subsistence halibut fishers are required to obtain a Subsistence Halibut Registration Certificate (SHARC) from the Restricted Access Management Program (RAM) office of NMFS prior to fishing.[2] Federal regulations (50 CFR Part 300.65(h)(4)) also authorize periodic surveys of SHARC holders in order to estimate annual subsistence harvests and related catch and effort information. The regulation states that, "Responding to a subsistence halibut harvest survey will be voluntary."

Table 1 provides population estimates for the eligible rural communities for 2000 based on the federal decennial census. The total population of these communities in 2000 was 82,707, of which 38,990 were

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[1] In December, 2004, the NPFMC adopted a recommendation to the Secretary of Commerce to add Naukati Bay to the original list of 117 eligible rural communities. Regulations implementing this change went into effect in 2008, resulting in 118 rural communities eligible for a portion of 2008 and all of 2009. Also, note that the Northern Pacific Halibut Act of 1982, under which the Alaska subsistence halibut fishery regulations are authorized, provides for fair and equitable allocations of halibut among U.S. fishers, but does not establish priorities for those allocations (see http://www.fakr.noaa.gov/frules/70fr16742.pdf, page 16747).

[2] The subsistence rules were amended in 2005 by regulations published in the Federal Register at 70 FR 16742, April 1, 2005. Among other things, this amendment provides for obtaining Community Harvest Permits, Ceremonial Permits, and Educational Permits.

Alaska Natives (47%). As also shown in Table 1, estimates published by the U.S. Bureau of the Census for 2010 report a total population of 84,353 for eligible rural communities and areas, including 39,164 Alaska Natives (46%) (U. S. Census Bureau 2011). In addition, the nonrural communities of Juneau and Ketchikan (excluding Saxman, whose residents are eligible) in 2010 had Alaska Native populations of 6,005 and 2,625, respectively (ADLWD 2011), most of whom were eligible to participate in the federal subsistence halibut fishery through their tribal membership. Also, an unknown number of eligible tribal members lived in other nonrural communities such as Anchorage and the Kenai Peninsula Borough.

PROJECT OBJECTIVES

The primary goal of the project was to estimate the subsistence harvest of halibut in Alaska in the calendar year 2010. Funding for 2010 ($103,000), as for 2009 and 2008, was reduced by about one-half compared to the first 5 years of the project. Consequently, the project plan for 2008 initially focused on estimating harvests only in regulatory areas 2C and 3A, where most of the harvests occur. However, because of lower costs of analysis and report preparation, due to the experience of conducting the survey for 5 years, and after evaluating available funds, it was decided to again produce a statewide estimate using a mailed survey to all SHARC holders. This goal was retained for 2009 and 2010. However, as in 2008 and 2009, outreach and supplemental interviewing in 2010 could occur only in a few communities in Area 2C. Therefore, the project objectives for 2010, listed below, were identical to the first 7 years of the project:

1. An estimate of the subsistence harvest of halibut in Alaska in 2010 by community, tribe, gear type, and IPHC regulatory area, along with an estimate of the number of individuals who subsistence fished for halibut in 2010.
2. An estimate of the harvest of halibut by SHARC holders while sport fishing in 2010.
3. An estimate of the number of lingcod *Ophiodon elongatus* and rockfish *Sebastes* spp. taken by subsistence fishers while subsistence fishing for halibut in 2010.

DATA COLLECTION METHODS

Public Outreach

In February 2011, the Division of Subsistence sent the report for project year 2009 (Fall and Koster 2011) to all eligible tribes, along with a short summary of the findings for 2009 and a letter informing them that the research would continue for the 2010 harvest year (Appendix B). Before 2009, the division published announcements in local newspapers about the upcoming mailing of halibut survey forms to SHARC holders. Due to rising costs and the reduced budget, these announcements were not published for the 2009 and 2010 study years. Information about the project was available on the NMFS web site for subsistence halibut fishing in Alaska (http://www.fakr.noaa.gov/ram/subsistence/halibut.htm).

Postal Household Survey

As noted, this was the eighth year of a harvest assessment program for the subsistence halibut fishery in Alaska. Because the subsistence halibut regulations came into effect in 2003, the first years of collecting harvest data were exploratory. Subsequent project years have built upon the lessons learned in the first years of the project and have benefited from outreach efforts to improve response rates. (See recommendations in Chapter 4.)

As recommended by Wolfe (2002), survey methodology was based upon a registration system for subsistence halibut fishers, which requires fishers to obtain a SHARC before fishing under federal subsistence halibut regulations. All 10,953 individuals who held a SHARC for any portion of 2010, as of December 31, 2010, were mailed a retrospective recall survey covering a 12-month harvest period: calendar year 2010. SHARCs issued to nontribal residents of eligible rural communities are valid for 2 years and tribal SHARCs are valid for 4 years, after which they must be renewed. Because of

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nonrenewals, the number of valid SHARCs for 2010 was down 7% from the 11,733 that were valid for 2009.

With one exception, the 2010 survey instrument was virtually identical to the form used for the 2003–2008 project years. It is based on recommendations by Wolfe (2002:Appendix A), with slight modifications such as project year and return address. (See Appendix C in this report for a copy of the 2010 survey instrument.) Wolfe (2002:15–18) provided justification for the kinds of data to be collected, which include name and address of the fisher; halibut harvests in numbers and pounds round (whole) weight by gear type in 2010; number of hooks usually set; and harvests of lingcod and rockfish taken while subsistence fishing for halibut. In 2003, a question addressing the water body fished (primary location) while subsistence fishing was added at the recommendation of NMFS staff. This question was retained for 2004–2010. Another was added in 2004 to record the location of sport halibut fishing by SHARC holders. The survey was designed to reduce the potential double counting of halibut taken with rod and reel gear, which could be reported in both the subsistence survey and in the ADF&G Division of Sport Fish *Statewide Harvest Survey* (Wolfe 2002:19). For 2009, a new question was added about the number of trips taken for subsistence halibut fishing in the study year. This question was retained for 2010.

A short explanatory letter with instructions on the back for completing the survey was included in the mailings (Appendix C). The survey was designed so that it could be directly returned to the Division of Subsistence, postage paid.

Presently under IPHC regulations, Community Development Quota (CDQ) fishers may retain halibut under 32 inches (U32; formerly called "sublegal" or "shorts") while commercial CDQ fishing in areas 4D and 4E only. These regulations require the CDQ organization to report this harvest to the IPHC. To avoid double counting, subsistence fishers were instructed not to include these fish on their subsistence halibut survey.

During an October 2003 meeting of the Alaska Native Subsistence Halibut Working Group (ANSHWG), held before the mailed survey for the first project year, community representatives expressed concern that not all fishers would know which fish were to be included under the category "rockfish" for the incidental harvest question on the survey. This would have led to an overestimation of this harvest if fishers reported fish such as Pacific cod *Gadus macrocephalus* or various species of sculpins in response to this question. The instructions mailed with the survey provided guidance on this question.[3]

Table 2 provides a chronology of key activities during the project. Table 3 provides a summary of response rates by mailing, SHARC type (rural or tribal), and place of residence. The first mailing to 10,953 SHARC holders occurred on March 16, 2011. The second mailing to 5,702 SHARC holders occurred on May 16, 2011. For the 2003– 2008 study years, a third mailing took place, usually in April or May. Due to increasing printing and mailing costs, and the previous relatively low responses to this mailing, the third mailing did not occur in 2010 or 2011.

The Division of Subsistence created a dedicated e-mail address that recipients of the postal survey could use if they had questions about how to respond. Also, the RAM Program set up a toll-free telephone number (1-800-304-4846) to provide information about the subsistence halibut program, including the harvest assessment program. Both the e-mail address and toll-free telephone number appeared on the survey. A set of "frequently asked questions" and responses was developed by ADF&G and NMFS staff

[3] The principal investigators for this project are aware that more than 30 species of rockfish inhabit Alaska waters. (See Alaska Administrative Code 5 AAC 39.975 for definitions of management assemblages of rockfishes.) The goal of this project was to keep the questions about incidental harvests simple. As discussed in the recommendations section (see Chapter 4), if more precise harvest data for various rockfish are needed for particular areas, future research should be designed and funded to address these data needs.

members to guide staff responses to telephone calls and e-mail inquiries about how to fill out the survey form (Appendix D [FAQ], Appendix C [survey]).

Community Visits and In-Person Surveys

Because the response rates to the postal survey vary by community and tribe, the mailings were again supplemented in selected communities with household surveys conducted by local research assistants hired through subcontracts with Alaska Native tribes. Because of the large number of eligible communities and tribes, it was not possible to conduct surveys in most communities. Additionally, because of reductions in the budget, surveys for 2010 harvests, as for 2009 harvests, were limited to selected communities in Area 2C.

In the 2010 project year, the interviews were administered in Sitka, Hydaburg, Angoon, and Ketchikan. Cooperative agreements with Sitka Tribe of Alaska and Hydaburg Cooperative Association supported interviewing in those communities. A contract with the firm Admiralty Island Adventures supported interviewing in Angoon and Ketchikan. In each community, the surveys were administered face-to-face or by telephone.

SAMPLE ACHIEVEMENT

Table 3 reports sample achievement by tribe, rural community, and community of residence. Overall, 6,670 surveys were returned by 10,953 SHARC holders, a response rate of 61% (Figure 2). For residents of the 118 eligible rural communities and eligible rural areas who did not register as tribal members, 4,645 of 7,047 surveys were returned (66%). As shown in Figure 3, in 2010 there were 11 communities with more than 100 nontribal SHARC holders, accounting in total for 85% of all nontribal SHARCs issued in rural communities. Return rates were 60% or more in 10 of these communities; the return rate for Kodiak, the rural community with the most SHARC holders, was 55%.

Of the 3,906 individual tribal members who held SHARCs in 2010, 2,025 (52%) returned surveys. As shown in Figure 3, there were 18 tribes with more than 70 members who obtained SHARCs. Return rates for these 18 tribes varied widely, from 87% in Hydaburg (where the Hydaburg Cooperative Association conducted surveys to supplement the return of surveys by mail) to 38% for the Sun'aq Tribe of Kodiak (where no directed outreach occurred). In total, these 18 tribes accounted for 71% of all tribal SHARCs.

Figure 4 illustrates survey response rates by place of residence of SHARC holders for the 22 communities with 100 or more SHARC holders in 2010. These communities accounted for 84% of all SHARCs and 86% of all returned surveys. Response rates were 50% or higher in all but 4 of these communities.

Figure 5 shows the survey return rate by response category (see also Table 3). After the first mailing, 5,188 surveys were returned, for a response rate of 47%. Responses to the second (final) mailing added 1,046 surveys, for a total response to the postal survey of 6,234 surveys, 57% of the 10,953 SHARC holders. In addition, surveys administered by representatives of tribal and other organizations working with ADF&G, added 436 surveys. Most of these were in Hydaburg, Sitka, Angoon, and Ketchikan. This brought the total response to 6,670 surveys, 61% of all individuals who held SHARCs in 2010.

The overall response rate for the survey for 2010 increased compared to 2009, from 59% to 61%. The return rate was the highest in 2003 at 65% and the lowest in 2007 at 58% (Table 19). The number of returned surveys increased over the first 3 years of the project, from 7,593 in 2003, to 8,524 in 2004, and 8,565 in 2005, reflecting the larger number of SHARC holders in 2004 and 2005 and the larger number of staff administered surveys in 2005. The total number of surveys dropped slightly in 2006, to 8,426, but increased again to 8,682 surveys in 2007, the largest annual total for the 8 years of the project. The number of surveys returned for 2008 dropped to 7,316, reflecting the sharp drop in the number of SHARC holders in 2008. For 2009, 6,944 surveys were received, and for 2010, there were 6,670 returned surveys, the lowest total of the 8 years of the project; 2010 was also the year with the lowest number of eligible

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SHARCs (10,953).[4] The response rate by mail declined during the first 5 years of the project, from 62% in 2003 to 59% in 2004, 55% in 2005, 52% in 2006, and 50% in 2007. In 2008, the response rate by mail increased to 60%, the highest since the first project year, but declined to 56% for 2009 and 57% in 2010.

As noted above, due to increasing costs and a decreased budget, only 2 mailings of surveys occurred for the 2009 and 2010 study years; 3 mailings had occurred in the previous 6 study years. Responses to the third mailing had dropped since the first years of the project, accounting for 10% of total returns in 2003 (1,211 surveys) and 14% in 2004 (1,970 surveys), compared to 4% in 2007 (599 surveys) and 4% in 2008 (473 surveys). Thus it is unlikely that eliminating the third mailing for 2009 and 2010 had a significant effect on return rates or harvest estimates.

The number of surveys returned as "undeliverable" increased from 208 in 2003 (Fall et al. 2004:45), to 617 in 2004 (Fall et al. 2005:48), 613 in 2005 (Fall et al. 2006:7), 1,194 in 2006 (Fall et al. 2007:7), and 1,700 in 2007 (Fall and Koster 2008:54); there were 817 undeliverable surveys in 2008 (Fall and Koster 2010:58), 653 in 2009 (Fall and Koster 2011:6), and 713 in 2010 (Table 3). Subtracting "undeliverables" from the postal survey target gives a response rate by mail of 61% in 2010, compared to 63% in 2003, 62% in 2004, 57% in 2005, 57% in 2006, 54% in 2007, 64% in 2008, and 60% in 2009. More surveys were administered in person or via telephone in 2010 (436) than in 2009 (318). Before 2009, the number of staff administered surveys had ranged from 355 surveys in 2004 to 392 in 2003, 408 in 2008, 733 in 2005, 1,089 in 2007, and 1,522 in 2006. The lack of outreach and household surveys in Area 3A, Area 3B, and Area 4 communities in 2008, 2009, and 2010 due to budget reductions accounts for the reduced number of staff-administered surveys compared to 2005–2007.

DATA ANALYSIS

Data Entry

All returned surveys were reviewed for completeness prior to data entry. Responses were coded following standardized conventions used by the Division of Subsistence. Staff within the Information Management Section of the division set up database structures within Microsoft SQL Server[5] at ADF&G in Anchorage to hold the survey data. The database structures included rules, constraints, and referential integrity to insure that data were entered completely and accurately. Data entry screens were available on a secure Internet site. Daily incremental backups of the database occurred, and transaction logs were backed up hourly. Full backups of the database occurred twice weekly. This ensured that no more than one hour of data entry would be lost in the unlikely event of a catastrophic failure.

Survey responses were manually entered twice, and survey forms were electronically scanned. All data were compared programmatically for inconsistent data entry. Double data entry ensured a more accurate transfer of information from the coded survey forms into the database, and is a standard Division of Subsistence practice. Data did not pass to the processing phase until inconsistencies within the twice-entered data set were eliminated. The scanned survey forms also facilitated efficient data correction and editing.

Information was processed and analyzed using MS SQL programming. Initial processing included the performance of standardized logic checks of the data. Logic checks are often needed in complex data sets where rules, constraints, and referential integrity do not capture all of the possible inconsistencies that may appear.

Analysis: Development of Harvest Estimates

Analysis included review of raw data frequencies, cross tabulations, table generation, and estimates of population parameters. Missing information was dealt with on a case-by-case basis. The Division of

[4] See Table 19 for sample sizes and fractions and selected project findings for the 8 project years.

[5] Product names are included for scientific completeness and do not constitute an endorsement.

Subsistence has standard practices for dealing with missing information, such as minimal value substitution or use of an average response for similarly characterized households or communities. Typically, missing data are an uncommon, randomly occurring phenomenon in household surveys conducted by the division, as was the case in this project.

In general, estimates of harvests, levels of participation, and other findings were calculated based upon the application of weighted means (Cochran 1977). These calculations are standard methods for extrapolating sampled data. In this project, each tribe and rural community was a separate stratum for purposes of estimating total harvests. In most cases, the mean for returned SHARC surveys was applied to the total number of SHARCs issued for the tribe or community to calculate the estimated harvest. (See Appendix Table E-1 for the reported harvests for each tribe and community.) The formula for standard expansion of community harvests is

$$H_t = \sum H_i \tag{1}$$

$$\text{where } H_i = h_i W_i \tag{2}$$

$$\text{and } W_i = \frac{N_i}{n_i} \text{ (Harvest weight factor per strata } i\text{)} \tag{3}$$

H_t = the total harvest (numbers of fish or pounds),

H_i = the total harvest, numbers or pounds, for tribe or community i

W_i = the weight factor for tribe or community i,

h_i = the total harvest, numbers or pounds, reported in returned surveys for tribe or community,

n_i = the number of returned surveys in each tribe or community, and

N_i = the number of SHARCs issued for tribe or community.

The following instances are exceptions. First, 149 SHARCs were held by eligible tribal members living outside of Alaska. Of these, 75 postal surveys were returned from this group, and very few of these returned surveys indicated any subsistence fishing activity. Rather than assign the mean value for their tribe (which would likely result in an overestimate of the harvest), all nonreturned surveys for SHARC holders with out-of-state addresses were coded as "did not fish."

Second, all SHARC holders were divided into 2 categories based upon the expiration date of their SHARC. SHARCs having an expiration date falling within the project period and that were not renewed were treated as separate strata from other SHARCs for the purpose of generating harvest estimates. This was done to account for potential bias and resulting overestimation of harvests for SHARCs that were fished for only part of the year. During 2010, 1,012 rural and 159 tribal SHARCs expired and were not renewed; of those, 402 (40%) rural SHARCs and 54 (34%) tribal SHARCs participated in the survey.

Third, as in 2009, for tribal and rural SHARC holders from Nanwalek, comparisons of reported harvests with estimates from previous years, plus relatively low response rates, suggested that survey responses included all harvesters. Therefore, reported harvests were used as total harvest estimates for both the Nanwalek tribe and for Nanwalek rural SHARC holders. Finally, again as in 2009, for Native Village of Port Graham, one respondent reported harvests far above the mean for other respondents. This SHARC holder was treated as a separate strata so as not to overestimate harvests for the tribe.

The RAM division did not issue any community, educational, or ceremonial permits for 2010. If harvests under any of these permits had occurred, the totals would have been added to the estimates for the tribe of the permit holder because they are not reported by individuals in their response to the SHARC postal survey.

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It should also be noted that not every individual who obtained a SHARC as a tribal member resided in the community where his or her tribe's headquarters is located. Therefore, the sum of harvest estimates for tribal SHARC holders and rural resident SHARC holders does not necessarily equal the halibut harvest for particular communities of residence. Rather, an additional analysis was necessary to estimate harvests by community of residence that assigned tribal SHARC holders to a community based on their mailing addresses. Appendix tables E-4, E-5, and E-6 report project results by place of residence of the SHARC holders.

The standard deviation (*SD*) (or Variance [*V*], which is the *SD* squared) of the harvest was calculated with the raw, unexpanded data. The Standard error (*SE*), or *SD* of the mean, was also calculated for each community or tribe. This was used to calculate the relative precision of the mean, or the likelihood an unknown value falls within a certain distance from the mean. In this project, the relative precision of the mean is shown in the tables as a confidence interval (*CI*), expressed as a percentage. Once the standard error was calculated, the *CI* was determined by multiplying the *SE* by a constant that reflected the level of significance desired, based on a normal distribution. The constant for 95% confidence intervals is 1.96. Though there are numerous ways to express the formula below, it contains the components of a *SD*, *V*, and *SE*.

Relative precision of the mean (*CI*%):

$$CI\%(\pm) = \frac{t_{\alpha/2} \times \frac{s}{\sqrt{n}} \times \sqrt{\frac{N-n}{N-1}}}{\bar{x}} \tag{4}$$

$$s = \sqrt{\sum_{i=1}^{t} \frac{\sum(x - \overline{x_i})^2}{n_i - 1}} \tag{5}$$

Where

s = sample standard deviation

x = reported amount harvested by individual SHARC holders

$\bar{x}$ = mean harvest

n = total sample size

N = total population size

n_i = tribal or community sample size

N_i = tribal or community population size

$t_{\alpha/2}$ = Student's *t*-statistic for alpha level (α=.95) with *n*–1 degrees of freedom.

Project staff explored the possibility of nonresponse bias for returned mail-out surveys and its effect on harvest estimates. However, it was determined that responses to the survey, including harvest levels and involvement in the fishery, were not notably different between any of the response categories (responses to the first mailing, the second mailing, and staff administered surveys) (see Appendix Table E-2).

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As noted above, survey respondents provided harvest estimates in pounds round (whole) weight. For ease of comparison with estimates of halibut removals in other fisheries, we have converted these estimates to pounds net (dressed, head off) weight, where 0.75 × round weight = net weight.[6]

Products

The public review draft of this final report was completed in November 2011 and circulated for review and comments. The draft report was also posted at the Division of Subsistence website. A presentation of the project findings and recommendations occurred at the December 2011 meeting of the NPFMC in Anchorage, Alaska. In past study years, draft results were also reviewed during a meeting of the Alaska Native Subsistence Halibut Working Group (ANSHWG), but a meeting of this advisory group did not take place in December 2011. The final report was revised in consideration of comments and suggestions received from reviewers of the public review draft. In addition to the final report, a short findings summary was prepared (Appendix F). The summary was sent to tribal government representatives and other interested individuals and groups. This report was posted on the Division of Subsistence web site and the RAM website in PDF format for downloading and printing by the public. Printed copies of this report were sent to the Alaska Resources Library and Information Services as well as the Alaska State Library.

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[6] The factor of 0.75 for converting halibut round weight to net weight is the standard used by the International Pacific Halibut Commission and the ADF&G Division of Sport Fish. Division of Subsistence studies, as reported in the Technical Paper series and in the Community Subsistence Information System (http://www.subsistence.adfg.state.ak.us/CSIS/, hereinafter referred to as CSIS, and formerly the Community Profile Database [Scott, C.L., B. Brown, G.B. Jennings, and C. Utermohle. *Unpublished*. Community Profile Database, 2001, for Microsoft Access 2000. Version 3.12. Alaska Department of Fish and Game Division of Subsistence, Juneau. Hereinafter referred to as CPDB.]), generally use a factor of 0.72 for converting halibut round weights to net weights, based on Crapo et al. 1993:7), who reports that on average, the weight of a dressed halibut with the head removed is 72% of the round weight, with a range of 68% to 80%. In Division of Subsistence Technical Papers, "net" weight (dressed, head off) is usually referred to as "usable weight."

CHAPTER 2: FINDINGS

SUBSISTENCE HALIBUT HARVESTS IN 2010

Estimated Number of Subsistence Halibut Fishers

Of the 10,953 individuals who held valid SHARCs for any portion of 2010, an estimated 4,991 (46%) participated in the subsistence halibut fishery in 2010 (Table 4, Figure 6). Of the 3,906 individuals who held SHARCs as members of an eligible tribe, an estimated 1,502 participated in the fishery (38%). Of the 7,047 individuals who held SHARCs as residents of qualifying rural communities, an estimated 3,489 (50%) participated in the subsistence fishery for halibut in 2010. The largest number of estimated subsistence halibut fishers occurred in 2004—5,984 of 13,813 SHARC holders fished in the subsistence halibut fishery (43%), including 2,157 of 6,533 tribal SHARC holders (33%) and 3,827 of 7,280 rural SHARC holders (53%). The lowest estimated number of subsistence halibut fishers occurred in 2004—4,942 of 11,635 SHARC holders fished in the subsistence halibut fishery (42%), including 1,836 of 5,578 tribal SHARC holders (33%) and 3,106 of 6,057 rural SHARC holders (51%) (Figure 6.)

In 2003–2007, differences in the demography of tribal SHARC holders and rural SHARC holders probably accounted for some of the differences in the rate of participation in the subsistence halibut fishery between these 2 groups. As a proportion of total SHARC holders, about twice as many tribal SHARC holders were under 20 years of age compared to rural SHARC holders. This may reflect a policy on the part of some eligible tribes in the first years after the regulations were adopted to register all or most tribal members, including younger people who were less likely to participate in the subsistence fishery than adults. Despite the substantial drop in the number of tribal SHARC holders in 2008, 2009, and 2010, differences in the age structure of this group compared to rural SHARC holders remained. For example, in 2007, 13% of tribal SHARC holders were younger than 20 years of age, compared to 5% of rural SHARC holders (Fall and Koster 2008:11). In 2009, 11% of tribal SHARC holders less than 20 years of age, compared to 6% of rural SHARC holders (Fall and Koster 2011:9); and in 2010, 9% of tribal SHARC holders less than 20 years of age, compared to 5% of rural SHARC holders (Table 5, Figure 7).

As illustrated in Figure 8 (see also, Table 4), the largest number of Alaska subsistence halibut fishers in 2010 were from tribes and rural communities in Regulatory Area 2C (Southeast Alaska), 3,020 (61%). There were 1,574 subsistence halibut fishers (32%) from tribes and communities in Regulatory Area 3A (Southcentral Alaska); 176 (4%) from Regulatory Area 3B (Alaska Peninsula) tribes and communities; 99 (2%) from Regulatory Area 4A (Eastern Aleutians) tribes and communities; and 84 (2%) from Area 4E (East Bering Sea Coast) tribes and communities. Additionally, there were 38 (1%) halibut fishers who were members of tribes and residents of communities in the 3 other regulatory areas. As also shown in Figure 8, the distribution of subsistence fishers by regulatory area in 2010 was similar to that of 2003–2009, except, continuing the pattern established in 2008, there was a sharp decrease in the number of halibut fishers in Area 4E, from 376 in 2007 to 143 in 2008, 137 in 2009, and 84 in 2010. Compared to 2009, the estimated number of halibut fishers from tribes and rural communities also dropped in 2010 in 5 other regulatory areas, most notably in Area 3a (from 1,669 fishers to 1,574, a drop of 6%). The estimated number of subsistence halibut fishers in Area 2C dropped by 5% (from 3,187 in 2009 to 3,020 in 2010). In contrast, the estimated number of subsistence halibut fishers rose in Area 4A, from 79 in 2009 to 99 in 2010 (a 25% increase).

Alaska Native tribes with the most subsistence halibut fishers in 2010 included the Central Council of Tlingit and Haida Indians (184 subsistence halibut fishers), the Ketchikan Indian Corporation (136), the Sitka Tribe of Alaska (131), the Sun'aq Tribe of Kodiak (68), the Hydaburg Cooperative Association (63), the Metlakatla Indian Community (51), the Hoonah Indian Association (51), the Wrangell Cooperative Association (42), the Angoon Community Association (42), the Agdaagux Tribe of King Cove (41), the Qagan Toyagungin Tribe of Sand Point (32), and the Native Village of Eyak (30). Of the SHARC holders who registered as residents of eligible rural communities, the most subsistence fishers

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lived in Kodiak (827), followed by Sitka (632), Petersburg (384), Haines (252), Cordova (211), Wrangell (197), and Craig (172). Appendix Table E-3 provides details for each tribe and community regarding participation in the subsistence fishery and subsistence halibut harvests in 2010.

As noted above, not every tribal SHARC holder lives in his or her tribe's headquarters community. After assigning tribal members to a community based on their place of residence, an estimate of participation in the subsistence halibut fishery in 2010 by community can be obtained. Appendix Table E-4 provides project findings based on place of residence. Communities with 100 or more resident SHARC holders who participated in the subsistence halibut fishery in 2010 were Kodiak (900), Sitka (755), Petersburg (409), Haines (273), Wrangell (256), Craig (252), Cordova (235), and Ketchikan (198). Of the 8 Alaska communities with 100 or more subsistence halibut fishers in 2010, 5 had about the same or fewer fishers than in 2009 (±10%). The estimated number of subsistence halibut fishers in Sitka, Wrangell, and Craig each decreased by about 11% (Figure 9). Hoonah had an estimated 91 subsistence halibut fishers in 2010, a drop of 17% from the estimate of 109 fishers in 2009. (See Chapter 3 for further discussion of Kodiak, Petersburg, Cordova, and Sand Point as case study communities.) Nine non-Alaska-resident tribal SHARC holders subsistence fished for halibut in Alaska in 2010, compared to a high of 24 in 2005 and low of zero in 2005 and 2007.

Estimated Alaska Subsistence Halibut Harvests in 2010 by SHARC Type and IPHC Regulatory Area

Table 4 reports estimated Alaska subsistence halibut harvests for 2010 by SHARC type, IPHC regulatory area, and gear type. The total estimated subsistence halibut harvest in Alaska in 2010 was 43,332 fish (±8%) for 797,560 lb (net weight) (±3%).[7] As estimated in pounds net weight, 54% of the subsistence halibut harvest (430,866 lb [±5%]) was taken by fishers registered with tribes or rural communities in Regulatory Area 2C (Figure 10). (Note that because some SHARC holders may fish in a regulatory area different from the location of their tribal headquarters or rural community of registration, the area totals in Table 4 do not precisely represent harvest locations. See the section on harvests by location, below.) Fishers from Area 3A tribes and rural communities harvested 303,632 lb (±12%) (38% of the state total). Harvests totaled 23,733 lb (±1%) (3%) for communities and tribes of Regulatory Area 3B. For tribal and rural SHARC holders in Area 4A, the estimated harvest was 14,477 lb (±2%) (2% of the net harvest weight). For Regulatory Area 4E,[8] the estimated harvest for tribal and rural SHARC holders was 12,250 lb (±3%) (2% of the net harvest weight). For Regulatory Area 4C, the estimated harvest for tribal and rural SHARC holders was 10,859 lb (±10%) (1% of the net harvest weight). Tribes and communities in 4D harvested 1,270 lb (±23%) (less than 1% of the net harvest weight) and those in 4B harvested 473 lb (±36%) (less than 1%).

The estimated subsistence harvest of 797,560 lb of halibut in 2010 represents a decrease of 7.4% compared to the estimated harvest of 861,359 lb in 2009 (Figure 11). Harvests by tribal SHARC holders decreased by 1.1% from 311,947 lb in 2009 to 308,569 lb in 2010. Tribal SHARC holders harvested 39% of the Alaska subsistence halibut harvest in 2010, compared to 36% in 2009. Subsistence halibut harvests by nontribal, rural resident SHARC holders decreased by 11.0%, from 549,412 lb in 2009 to 488,990 lb in 2010. This group accounted for 61% of the statewide subsistence halibut harvests in 2010, compared to 64% in 2009.

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[7] This approximates 1,139,371 pounds round (live or whole) weight. See footnote 6 in Chapter 1 for an explanation of the factor used to convert round weight to net weight.

[8] Community Development Quota (CDQ) organizations operating exclusively in areas 4D and 4E may retain U32 halibut (under 32 inches in length) from their commercial catches for home use. In 2010, a total of 9,517 lb net weight of halibut was retained by 3 organizations: Coastal Villages Regional Fund (3,924 lb), Bristol Bay Economic Development Corporation (2,155 lb), and Norton Sound Economic Development Corporation (3,438 lb) (Williams 2010). The IPHC includes these fish within the "personal use" removal category, a category that also includes subsistence harvests (Gilroy 2005:64). See also the section in Chapter 3, "Comparisons with Nonsubsistence Harvests."

Members of 64 Alaska tribes harvested subsistence halibut in 2010. In 2 others, SHARC holders fished but had no harvest. In 16 others, tribal members obtained SHARCs and returned surveys, but no one fished. Members of 16 other tribes held SHARCS, but no one returned a survey form. No one in the remaining 25 eligible tribes held a valid SHARC in 2010. All but one of these tribes was in Regulatory Area 4E (East Bering Sea Coast). As shown in Figure 12, members of the 13 tribes with harvests of 8,000 lb or more accounted for 64% of the total subsistence halibut harvest by tribal SHARC holders in 2010. These 13 tribes accounted for 58% of the tribal SHARCs (2,265 of 3,906). Members of the other 51 tribes with harvests accounted for about 36% of the total harvest by tribal members.

Residents of 49 eligible rural communities harvested subsistence halibut in 2010.[9] In 3 others, SHARC holders fished unsuccessfully. In 9 others, individuals obtained SHARCs but no one fished. Residents of 10 other eligible rural communities obtained SHARCs, but no one returned a survey form. No one in the remaining 47 eligible rural communities held a valid SHARC as a nontribal member in 2010. Most of these communities (38) were in Regulatory Area 4E (East Bering Sea Coast).[10] As shown in Figure 13, ten rural communities with harvests of over 10,000 lb accounted for 81% of the subsistence halibut harvest by the holders of rural (nontribal) SHARCs in 2010. Residents of the other 39 communities with harvests accounted for 19% of the total harvest by rural SHARC holders.

As also shown in Figure 13, rural SHARC holders from 2 communities accounted for 45% of the total harvest by this group in 2010: Kodiak (31%) and Sitka (14%). Adding Petersburg, the next highest rural community harvest at almost 9%, the top 3 rural communities accounted for 54% of the rural community (nontribal) subsistence halibut harvest in Alaska in 2010.

Estimated Alaska Subsistence Halibut Harvests in 2010 by Harvest Location

Survey respondents were asked to report the "water body, bay, or sound [that they] usually fished" for subsistence halibut in 2010. Multiple responses were permitted. In Table 6, estimated subsistence halibut harvests are reported for the 8 Alaska halibut regulatory areas and 22 subdivisions within these areas. It should be noted that regulatory area totals in Table 6 differ slightly from those reported in Table 4 because not all SHARC holders fished within the regulatory area in which their tribal headquarters or residence is located.

Subsistence halibut harvests in Regulatory Area 2C (Southeast Alaska) accounted for 53% of the Alaska subsistence halibut harvest in 2010 (424,818 lb [net weight]) (Figure 14, Table 6). Also, as shown in Figure 15 and Figure 16, three of the 5 geographic subareas with the largest subsistence halibut harvests in 2010 were in Area 2C: southern Southeast Alaska (254,366 lb [net weight]; 32% of the state total); the northern Southeast Alaska other than the Sitka Local Area Management Plan (LAMP) area (93,464 lb; 12%), and the Sitka LAMP area (76,988 lb; 10%).[11] Regulatory Area 3A (Southcentral Alaska) ranked second, with 39% of the state's total subsistence halibut harvest (312,650 lb [net weight]). Waters bordering the Kodiak Island road system (including Chiniak Bay) ranked second among subareas, with a subsistence halibut harvest of 103,066 lb (13% of the state total), and other Kodiak Island waters not along the road system area ("Kodiak Island–Other") ranked fourth (83,432 lb; 11%). Harvests within Cook Inlet waters of Area 3A accounted for 8% of the state total (65,809 lb) (ranking sixth), those within Prince William Sound added 42,279 lb (5% of the statewide total), and the Yakutat Area added 18,064 lb

[9] In this tally, Chiniak, listed separately in tables in this report, is counted as part of Kodiak, as it is for eligibility. Because some residents of eligible rural areas had mailing addresses in non-eligible communities, 3 non-eligible communities are listed as "rural communities" in Table 3. These were Juneau (3 SHARCs), Ketchikan (5 SHARCs), and Ward Cove (2 SHARCs). These 3 places are not included in this count of participating communities.

[10] Note that residents of these communities may have obtained SHARCs as tribal members.

[11] For this project, "northern Southeast Alaska" includes those waters of Regulatory Area 2C north of Frederick Sound, including waters surrounding Baranof Island and excluding the Sitka LAMP area. For a description of the Sitka LAMP area, see FR 68 18156, April 15, 2003, § 300.65(d)(1). The remaining waters of Area 2C are referred to as "southern Southeast Alaska" in this report.

(2%). Among regulatory areas, Area 3B (Alaska Peninsula, including the Chignik Area) ranked third with 3% of the Alaska total (23,009 lb). Area 4A (eastern Aleutian Islands) ranked fourth with 14,548 lb (2%), and Area 4C (Pribilof Islands) ranked fifth with 10,859 lb (1%). Area 4E (Bering Sea Coast) ranked sixth with 10,055 lb (1%). Most of the harvest in Area 4E came from the Yukon–Kuskokwim Delta area, with a smaller amount from Norton Sound and, as in 2009, and for the second time since the harvest monitoring project began in 2003, no harvest from Bristol Bay. Area 4D (St. Lawrence Island) added 1,171 lb (<1%); and Area 4B (western Aleutian Islands) added 450 lb (<1%).

Figure 17 reports estimated harvests in pounds net weight by location fished at the regulatory area level in 2003–2010. Table 7 compares estimated subsistence halibut harvests by regulatory area and geographic area in 2010 with those estimated for 2003–2009 and for the 7-year average from 2003–2009. As noted previously, for the state overall, the estimated harvest in pounds decreased by about 7% in 2010 from 2009 (Figure 18). The estimated harvest in 2010 was 24% lower than average for the first 7 years of the subsistence halibut harvest monitoring program (2003–2009) (Figure 19).

Estimated subsistence halibut harvests decreased in 5 of the 8 regulatory areas in 2010 compared to 2009 (Figure 17; Figure 18; Table 7). As in the first 7 years of the project, Area 2C (Southeast Alaska) accounted for the most subsistence halibut harvests in 2010 (424,818 lb; 53% of the state total); this harvest represents a decrease of 7% compared to 2009 (Table 7; Figure 17; Figure 18), but a 24% decrease compared to the 7-year average from 2003–2009 (Figure 19). The percentage of the total statewide subsistence halibut harvest that took place in Area 2C in 2010 was 53%, similar to 2009 (53%), 2008 (52%), 2007 (51%), 2006 (52%), and 2005 (51%), but a decline compared to 57% in 2004 and 60% in 2003. Harvests increased in the 3 subareas within Area 2C in 2010 compared to 2009, with a 3% decrease in the southern Southeast Alaska subarea, an 11% decrease in the northern Southeast Alaska subarea (excluding the Sitka LAMP area), and a 14% decrease in the Sitka LAMP area. Harvests were down in all 3 Southeast subareas compared to recent 7-year averages: 15% in southern Southeast Alaska, 42% in the Sitka LAMP, and 27% in the remainder of northern Southeast Alaska. The reasons for these changes in Area 2C are likely complex and beyond the scope of this report.[12]

Estimated harvests in Area 3A (Southcentral Alaska) decreased for the fifth straight year. The 2010 harvest of 312,650 lb dropped 5% from the 2009 harvest of 328,480 lb. The estimated subsistence halibut harvest in Area 3A in 2010 was 14% lower than the previous 7-year average (Figure 19). In contrast to the last 5 years, in terms of total pounds, the largest increase in estimated harvests over the first 3 years of the project took place in Area 3A, where the 2005 harvest of 429,275 lb was 6% higher than the estimate for 2004 (403,610 lb) and 50% higher than the estimate for 2003 (285,500 lb) (Table 7). Area 3A accounted for 39% of the statewide subsistence halibut harvest in 2010, 38% in 2009, 38% in 2008, 36% in 2007, 34% in 2006, 36% in 2005, and 34% in 2004, compared to 27% in 2003 (Table 7). In Area 3A in 2010 compared to 2009, subsistence halibut harvests increased in the Yakutat area by 26% and in the Prince William Sound area by 25%. Decreases in harvests occurred in the waters of Kodiak Island along the road system (down 5%), the remainder of the Kodiak Island area (down 9%), and the Cook Inlet area (down 19%) (Table 7). However, harvests in 2010 were lower than the previous 7-year averages in all 5 Area 3A subareas.

In Area 3B (Alaska Peninsula), harvests declined from 25,492 lb in 2009 to 23,009 in 2010 (down 10%) (Figure 17; Figure 18; Table 7). In Area 3B, the 2010 estimated harvest was the lowest of the 8 years of the project, 41% below the previous 7-year average, and notably below the estimates for 2005 (46,225 lb), 2006 (48,547), and 2007 (47,748 lb) (Table 7; Figure 17; Figure 19). Earlier reports (e.g. Fall and Koster 2010:12) suggested that improved participation in the SHARC program in 2006, 2007, and 2008 accounted for some of the increase in the estimated harvests in Area 3B in 2005–2008, compared to 2003 and 2004, the first 2 years of the harvest monitoring program. However, the number of SHARC holders

[12] Further discussion of differences between harvest estimates for 2003–2010 appears in Chapter 3 and Chapter 4.

for Area 3B tribes and rural communities decreased from 606 in 2008 to 309 in 2009 and 369 in 2010, a decline in program participation that may partially explain the lower harvest estimates for 2009 and 2010 (see discussion of Sand Point in Chapter 3).

Estimated subsistence halibut harvests in Area 4A (Eastern Aleutians) dropped 57% from 2009 (33,499 lb) to 2010 (14,548 lb). The harvest in Area 4A in 2010 was 44% lower than the previous 7-year average (Figure 19). There are only 3 communities in Area 4A: Akutan, Nikolski, and Unalaska–Dutch Harbor. Therefore, harvest estimates for individual communities strongly shape the area estimate. For example, previous reports have discussed how sampling achievement in Akutan evidently affected the area's harvest estimate (Fall and Koster 2010:13). For 2009, an increased harvest by SHARC holders living in Unalaska–Dutch Harbor, from 13,710 lb in 2008 to 29,306 lb in 2009, accounted for most of the change in the regulatory area's estimate between those 2 years, but estimated harvests in that community dropped to 13,081 lb for 2010. (See below for more discussion of harvest estimates for Unalaska–Dutch Harbor.)

In Area 4B (Western Aleutians) there was a large decrease of 62% in the estimated subsistence harvest of halibut in 2010 (450 lb) compared to 2009 (1,175 lb) (Table 7; Figure 17; Figure 18). The 2008 estimate was 147% higher than the previous 5-year average (Fall and Koster 2010:92). This increase in 2008 was likely due in part to the larger reported average size of halibut harvested in this area in 2008 (30.5 lb [net weight] per fish; see Table 9 in Fall and Koster 2010:66) compared to earlier years (19.5 lb [net weight] per fish in 2007 [Fall and Koster 2008:71]). The average weight of subsistence harvested halibut in Area 4B in 2009 was only 15.4 lb (see Table 9 in Fall and Koster 2011) and 12.6 lb in 2010 (see Table 9, below). The estimated harvest for Area 4B was 80% below the previous 7-year average (Figure 19), and lower than any other year since the program began in 2003.

Estimated subsistence harvests of halibut in Area 4C (Pribilof Islands) rose 71% in 2010 to 10,859 lb, from 6,323 lb in 2009 (Figure 17, Figure 18, Table 7). The 2010 was virtually identical to the previous 7-year average (0.1% higher) (Figure 19). As noted in reports for previous project years (Fall et al. 2005:15; Fall and Koster 2008:15), a high response rate to the survey, based upon follow-up household surveys and inseason data collection by the Central Bering Sea Fishermen's Association, likely produced very reliable harvest estimates for St. Paul, the largest community in Area 4C, after the first project year of 2003. However, due to funding reductions, this work did not take place for 2008, 2009, or 2010. The number of valid SHARCs held by St. Paul residents dropped from 246 in 2007 to 42 in 2008, 44 in 2009, and 41 in 2010, and the response rate to the survey declined from 83% in 2007 to 45% in 2008, 34% in 2009, and 29% in 2010. However, the estimated number of subsistence halibut fishers in the community remained about the same: 14 in 2007, 15 in 2008, 16 in 2009, and 19 in 2010.

In Area 4D (Central Bering Sea), the subsistence halibut harvest estimate for 2010 of 1,171 lb was 82% higher than the estimate of 644 lb for 2009. However, the 2010 estimate was 78% lower than the previous 7-year average for Area 4D (Figure 17; Figure 18; Figure 19; Table 7). It is likely that this sharp drop in the harvest estimate for Area 4D since 2008 is the result of nonrenewal of SHARCs by subsistence fishers. The number of SHARCs held by residents of Savoonga, the principal halibut harvesting community in Area 4D, dropped from 43 in 2007, with an estimated 15 subsistence halibut fishers, to 17 SHARC holders in 2009, with an estimated 7 subsistence halibut fishers, and to 17 SHARC holders in 2010 with 6 fishers.

As in Area 4D, declining registration of subsistence halibut fishers in the SHARC program may also be a primary cause of lower harvest estimates in Area 4E (East Bering Sea Coast) over the last 3 years (2008–2010). Although the estimated harvest of 10,055 lb in 2010 was a 15% increase from the 8,749 lb estimated for 2009, the 2010 harvest was 75% lower than the 7 year average from 2003–2009 (Figure 17; Figure 18; Figure 19; Table 7). Lower harvest estimates for this area are likely in part attributable to the substantial drop in valid SHARCs held by tribal members and rural community residents of Area 4E, from 1,191 in 2007 to 421 in 2008, 374 in 2009, and 286 in 2010. Also, unlike 2003–2007, no outreach, face-to-face interviewing, or telephone calls took place in Area 4E communities in 2008, 2009, or 2010,

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resulting in lower response rates in several communities compared to previous years. For example, response rates dropped in Toksook Bay from 41% (218 of 533 SHARCs) in 2007 to 32% (11 of 34 SHARCs) in 2008, 39% in 2009 (13 of 33), and 38% in 2010 (12 of 32); and in Tununak, from 64% (44 of 69 SHARCs) in 2007, to 10% (7 of 68 SHARCs) in 2008, 55% (6 of 11 SHARCs) in 2009, and 17% (3 of 11 SHARCs) in 2010.

Figure 20 illustrates the average subsistence halibut harvest in pounds net weight for those SHARC holders who subsistence fished in 2010. Figure 21 illustrates the average harvest per fisher in numbers of halibut. For the state overall, the average subsistence halibut fisher harvested 160 lb (net weight) or about 8.7 halibut in 2010. Average harvests per fisher at the regulatory area level ranged from 46 lb (net weight) in Area 4B to 428 pounds per fisher in Area 4C. Average subsistence halibut harvests were lower in 2010 than in any of the previous 7 years. In 2003, subsistence fishers on average harvested 8.9 halibut (211 lb) (Fall et al. 2004:12–13): in 2004 the average harvests were 8.8 halibut and 199 lb (Fall et al. 2005:15); in 2005, the average harvests were 9.9 halibut and 210 lb (Fall et al. 2006: 17); in 2006, average harvests were 9.2 halibut and 190 lb (Fall et al. 2007:18); in 2007, the averages were 9.1 halibut and 174 net pounds harvested per fisher (Fall and Koster 2008:16); in 2008, average harvests were 9.2 halibut and 167 lb (Fall and Koster 2010:13); and in 2009, average harvests were 8.6 halibut and 163 lb (Fall and Koster 2011:14).

Subsistence Halibut Harvests by Place of Residence

As shown in Figure 22, there were 26 Alaska communities whose residents had combined estimated subsistence halibut harvests of approximately 7,000 lb or more (net weight) in 2010. In this figure, community totals include harvests of all SHARC holders living in the community, regardless of type of SHARC (tribal or rural) or tribal affiliation.[13] Residents of these communities accounted for 88% of the total Alaska subsistence halibut harvest in 2010. Residents of Kodiak (Kodiak includes the city of Kodiak and other portions of the Kodiak Island Borough connected to it by roads) ranked first with 21% of the total Alaska harvest, and Sitka ranked second with about 10%. With 12,824 and 8,881 residents, respectively, these 2 communities included about 26% of the population of rural communities eligible to participate in the subsistence fishery. There were 68 other Alaska communities with at least one resident who participated in the subsistence halibut fishery in 2010. The total harvest for these other communities represented about 12% of the state total.

For 2010, 149 SHARC holders provided out-of-state addresses from 117 communities in 24 states, provinces, and territories.[14] Seattle was the non-Alaska community with the most SHARC holders, with 5. Nine non-Alaska resident SHARC holders subsistence fished for halibut in 2010, with a harvest of 20 fish and 603 lb (0.08% of the state total) (see Appendix Table E-4). In 2009, 6 non-Alaska residents participated in the subsistence halibut fishery, with a harvest of 22 fish and 525 lb (0.06% of the state total). In 2008, 3 non-Alaska residents participated in the subsistence halibut fishery, with a harvest of 13 fish and 237 lb (0.03% of the state total). In 2007, no non-Alaska resident SHARC holders participated in the Alaska subsistence halibut fishery. In 2006, 7 non-Alaska resident SHARC holders subsistence fished for halibut, reporting a harvest of 72 fish and 2,346 lb (net weight) (0.2% of the state total). No non-Alaska resident SHARC holders subsistence fished for halibut in 2005. In 2004, 24 non-Alaska residents reported subsistence fishing for halibut in Alaska, with an estimated total harvest of 169 fish and 4,845 lb (net weight) (about 0.4% of state total). In 2003, 5 non-Alaska residents participated in the Alaska subsistence halibut fishery, harvesting 5 fish.

[13] Note that nonrural places, such as Anchorage, Juneau, Ketchikan, and Valdez, appear in Figure 22 and in Appendix Tables E-4, E-5, and E-6, because members of eligible Alaska Native tribes may participate in the fishery regardless of where they live, and because some eligible residents of rural areas have mailing addresses in nonrural places.

[14] Note that members of eligible tribes may obtain SHARCs regardless of their place of residence.

Subsistence Harvests by Gear Type

Table 6 and Figure 23 report the estimated subsistence harvests of halibut in Alaska in 2010 by gear type and regulatory area fished. In total, 610,992 lb (77%) of halibut (net weight) were harvested using setline (stationary) gear (i.e., longlines, or "skates," sometimes set with a power winch attached to a vessel) (the highest percentage of any of the 8 study years) and 186,567 lb (23%) were harvested using hand-operated gear (i.e., handlines or lines attached to a rod or pole). There were notable differences between regulatory areas (Table 6, Figure 23). Harvests using setline gear predominated in Area 2C (Southeast Alaska) (83% of the area's total subsistence harvest), 3A (Southcentral Alaska) (72%), Area 4A (Eastern Aleutian Islands) (53%), Area 4C (Pribilof Islands) (93% setline gear), Area 4D (Central Bering Sea) (72%), and Area 3B (Alaska Peninsula) (56%). In contrast, hand-operated gear accounted for most of the subsistence halibut harvests in Area 4B (Western Aleutian Islands) (53%) and Area 4E (East Bering Sea Coast) (69%). In 2009, 72% of the total Alaska subsistence halibut harvest was taken with setline gear and 28% with hand-operated gear (Fall and Koster 2011:15). In 2008, 74% of the total Alaska subsistence halibut harvest was taken with setline gear and 26% with hand-operated gear (Fall and Koster 2010:14). In 2007, 69% of the total Alaska subsistence halibut harvest was taken with setline gear and 31% with hand-operated gear (Fall and Koster 2008:16–17). In 2006, 70% of the total Alaska subsistence halibut harvest was taken with setline gear and 30% with hand-operated gear (Fall et al. 2007:18–19). In 2005 also, 70% of the total Alaska subsistence harvest was taken with setline gear and 30% with hand-operated gear (Fall et al. 2006: 18). In 2004, 74% of the Alaska subsistence halibut harvest was taken with setline gear and 26% with hand-operated gear (Fall et al. 2005:16). In 2003, 72% was taken with setline gear and 28% with hand-operated gear (Fall et al. 2004:13).

Number of Hooks Fished with Setline Gear

Respondents who fished with setline (stationary) gear (longline or skate) were asked to report how many hooks they "usually set." The findings by regulatory area are reported in Table 8. For the fishery overall, most setline fishers (40%) used 30 hooks, the maximum number allowed by regulation in areas 2C, 3A, 3B, 4A, and 4B (there is no hook limit in areas 4C, 4D, and 4E) (Figure 24). The next most frequently reported number was 20 hooks, usually used by 17% of the fishers who used setline gear. Fifteen hooks (11%) ranked third, followed by 25 hooks (8%) and 10 hooks (6%). This pattern is similar to that recorded for 2009, when 37% of set line fishers used 30 or more hooks and 19% used 20 hooks (Fall and Koster 2011:15); 2008, when 42% of setline fishers used 30 or more hooks and 19% used 20 hooks (Fall and Koster 2010:14–15); 2007, when 41% of setline fishers used 30 or more hooks and 19% used 20 hooks (Fall and Koster 2008:17); 2006, when 38% of setline fishers used 30 or more hooks and 20% used 20 hooks (Fall et al. 2007:19); 2005, when 42% of setline fishers used 30 or more hooks and 20% used 20 hooks (Fall et al. 2006:18–19); 2004, when 44% of setline fishers used 30 hooks and 19% used 20 hooks (Fall et al. 2005:16), and 2003, when 43% of setline fishers used 30 hooks and 20% used 20 hooks (Fall et al. 2004:13).

Thirty was the most frequently used number of hooks with setline gear in 7 of the 8 regulatory areas (Table 8): 2C (Southeast Alaska), 39%; 3A (Southcentral Alaska), 43%; 3B (Alaska Peninsula), 41%; 4A (Eastern Aleutian Islands), 54%; Area 4C (Pribilof Islands), 83%; Area 4D (Central Bering Sea), 61%; and 4E (East Bering Sea Coast), 34%. In Area 4B (Western Aleutians), 45% of fishers who used setline gear used 10 hooks and 36% used 20 hooks.

Number of Subsistence Halibut Fishing Trips

For 2010, for the second time in the harvest survey program, respondents were asked to report the number of subsistence fishing trips they took for halibut in the study year. The average number of trips for subsistence halibut fishers was 4.7 (the same as in 2009 [Fall and Koster 2011:15]), with those holding tribal SHARCs averaging 5.1 trips (compared to 5.5 in 2009) and those holding rural SHARCs averaging 4.6 trips (compared to 4.5 trips in 2009). In most regulatory areas, the average subsistence fisher took

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between 4 and 7 trips, with higher averages in Area 4D (average of 6.8 trips) and Area 4C (average of 7.3 trips) (Figure 25). As shown in Figure 26, about 76% of fishers took 5 or fewer trips, and about 17% took between 6 and 10 trips. Six percent took between 11–20 trips, and about 1% took more than 20 trips.

The average number of subsistence halibut harvested per fishing trip in 2010 was 1.8 (the same as in 2009), with tribal SHARC holders averaging 2.3 fish and rural SHARC holders averaging 1.6 fish. The highest average harvests per trip occurred among tribal SHARC holders in Area 4B (3.5 halibut per trip) and Area 4C (2.8 halibut per trip) (Figure 27).

Sport Harvests of Halibut by SHARC Holders

Survey respondents were asked to report the number of halibut and pounds of halibut they harvested "while sport fishing during 2010." They were instructed not to include fish they considered sport caught as part of their subsistence halibut harvest. The goal of this question was to avoid double counting harvested halibut in this survey and in the statewide survey of sport fishers administered by the Division of Sport Fish of ADF&G. Answering this question required respondents to classify their hand-operated gear (i.e., hook and line and rod and reel) harvests as either subsistence or sport; these gear types are legal gear for both sport fishing and subsistence fishing. Fish reported in the survey as "sport harvests" are not included in the estimated subsistence harvests discussed above. If SHARC holders also received the sport fish survey for 2010, they would be expected to report only their sport caught halibut and not include any halibut they reported as subsistence harvests, even if taken with rod and reel or handheld line with two or fewer hooks. Note that the project findings do not represent the total recreational halibut harvest by residents of eligible communities and tribes in 2010, because individuals from these tribes and communities who did not obtain SHARCs could have sport fished.

As shown in Table 4 and Table 6, the estimated total sport halibut harvest by holders of SHARCs in 2010 was 8,651 fish and 149,241 lb (net weight). By area fished, most of the sport halibut harvest by SHARC holders occurred in Area 3A (Southcentral Alaska) (72,244 lb; 48%) and Area 2C (Southeast Alaska) (71,364 lb; 48%) (Table 6). In total, an estimated 2,297 SHARC holders (21%) reported that they sport fished for halibut in 2010. A large proportion of these fishers fished in either Area 2C (1,313; 57%) or Area 3A (887; 39%) (Table 6). (See Appendix Table E-7 for estimated sport halibut harvests by tribe and nontribal rural community SHARC holders.)[15]

Estimated Average Net Weights of Subsistence- and Sport-Caught Halibut

Table 9 reports the average net weight of subsistence- and sport-caught halibut by SHARC holders in 2010, based upon estimates provided by survey respondents. For the state, the estimated average net weight of subsistence caught halibut was 18.4 lb and the average net weight of sport harvested halibut by SHARC holders was 17.3 lb. For the halibut reported as harvested in the SHARC program by SHARC holders in 2010, the average net weight per harvested halibut was 18.2 lb. Between regulatory areas, there was a range of average weights per halibut. The halibut harvested by the communities of Area 4D (St. Lawrence Island), averaged 31.0 lb (net weight) per fish. Halibut harvested in the subsistence fishery in Area 4C were also larger than the state average, at 21.1 lb per fish, as were the halibut harvested in the

[15] The ADF&G postal survey did not investigate the criteria by which survey respondents classified their rod and reel (hook and line attached to a rod or pole) halibut harvests as subsistence or sport. However, a supplemental mailing to 1,098 SHARC holders from Kodiak and Sitka who fished for halibut in 2004 asked respondents to provide reasons for classifying their halibut harvests as sport or subsistence. For a discussion of the findings, see Fall et al. 2006:19–20, 123–138. In short, the primary factor (for 69% of respondents) was the gear used to harvest the fish: respondents viewed rod and reel as "sport gear" and setline gear as "subsistence gear." Another factor, reported by 12%, concerned the composition of the fishing group. If the SHARC holders had fished with relatives or friends who did not possess a SHARC, they classified their fishing as recreational. Harvest amounts were also a consideration: harvests of one or two halibut with a rod and reel were considered "sport" by some respondents, but if they harvested more than 2 fish with rod and reel in one day, they classified the harvest as subsistence. Finally, about 19% of the respondents gave reasons related to the uses of the fish or other cultural and lifestyle explanations.

subsistence fishery in 2C, at 19.7 lb per fish. In contrast, in Area 4E, halibut harvested in the subsistence fishery averaged 12.9 lb (net weight), 70% of the statewide average.

The average weight of halibut declined steadily over the first 6 years of this project. In 2009, averages rose to 19.0 lb per fish in the subsistence fishery, 16.6 lb for sport-caught halibut, and 18.5 for all halibut (Fall and Koster 2011:66), compared to 2008, when the average subsistence caught halibut weighed 18.2 lb, sport harvested halibut by SHARC holders weighed 17.3 lb, and all halibut harvested by SHARC holders averaged 18.1 lb (Fall and Koster 2010:15–16). However, averages for subsistence-harvested halibut (18.4 lb) and all halibut (18.2 lb) for 2010 were down from those recorded for 2009. In 2007, the estimated average weight of halibut harvested in the subsistence fishery was 19.2 lb, the average halibut harvested by SHARC holders while sport fishing weighed 17.9 lb, and the average of all halibut harvested noncommercially was 19.0 lb (Fall et al. 2007; Fall and Koster 2008:18). In 2006, the estimated average weight of halibut harvested in the subsistence fishery was 20.8 lb, the average halibut harvested by SHARC holders while sport fishing weighed 19.9 lb, and the average of all halibut harvested noncommercially was 20.7 lb (Fall et al. 2007:20). In 2005, the estimated average weight of halibut harvested in the subsistence fishery was 21.1 lb, the average halibut taken by SHARC holders while sport fishing weighed 20.8 lb, and the average of all halibut harvested noncommercially was 21.0 lb (Fall et al. 2006:20). In 2004, the statewide average for subsistence harvested halibut was estimated at 22.8 lb, the average sport harvested halibut by SHARC holders was 20.0 lb, and the average for all halibut harvested noncommercially was 22.2 lb (Fall et al. 2005:17). In 2003, the statewide average for subsistence harvested halibut was 23.7 lb, the average sport harvested halibut by SHARC holders was 22.8 lb, and the average for all halibut harvested noncommercially was 23.5 lb (Fall et al. 2004:14).

ROCKFISH HARVESTS

Survey respondents were asked to estimate the number of rockfish they harvested while subsistence fishing for halibut in 2010. Harvest data at the species level were not collected as part of this survey.

Note that these survey results do not represent an estimate for the total subsistence rockfish harvest by SHARC holders in 2010 because they might have harvested rockfish while fishing for species other than halibut, and other fishers in the communities who did not obtain SHARCs might have harvested rockfish. The Division of Subsistence Community Subsistence Information System (CSIS)[16] includes estimates of rockfish harvests for communities in which comprehensive household surveys have been administered.

It should also be noted that the label "bycatch" for these harvests is misleading.[17] Rockfish are used for subsistence purposes in rural communities throughout their range in Alaska (CSIS). It is highly likely that most rockfish harvested incidentally in the subsistence halibut fishery are utilized as a subsistence food. It is highly unlikely that many incidentally caught rockfish are discarded in this subsistence fishery.

As shown in Table 10, the statewide estimated rockfish incidental harvest in the subsistence halibut fishery in 2010 was 12,851 fish by 1,322 fishers (12% of all SHARC holders, and 27% of all SHARC holders who subsistence fished for halibut in 2010). This is an average of about 2.6 rockfish per fisher for all subsistence halibut fishers in the SHARC program, and about 9.7 rockfish per fisher for those who had a rockfish harvest. Most of the subsistence halibut fishers who caught rockfish fished in Area 2C (Southeast Alaska) (937 fishers; 71%) and Area 3A (343 fishers; 26%). In Area 2C, about 31% of

[16] http://www.subsistence.adfg.state.ak.us/CSIS. Hereinafter cited as CSIS; see footnote 6.

[17] The Magnuson-Stevens Fishery Conservation and Management Act (Section 3) defines "bycatch" as "fish harvested in a fishery, but which are not sold or kept for personal use, and includes economic discards and regulatory discards. Such term does not include fish released alive under a recreational catch and release fishery management program." Federal regulations (50 CFR 679.2) define "bycatch" or "bycatch species" as fish caught and released while targeting another species or caught and released while targeting the same species; under 50 CFR 600.10 "discard" means to release or return fish to the sea, whether or not such fish are brought fully on board a fishing vessel. In all cases, "bycatch" means to discard fish and excludes retaining fish for use. The federal definition of "incidental catch" or "incidental species" is "fish caught and retained while targeting on some other species, but does not include discard of fish that were returned to the sea" (50 CFR 679.2).

subsistence halibut fishers incidentally harvested rockfish, as did 21% in Area 3A (Southcentral Alaska). (See Appendix Table E-7 for estimated rockfish harvests by tribe and by nontribal rural community SHARC holders.)

As illustrated in Figure 28 and Figure 29, most of the incidental rockfish harvest in 2010 was harvested in Area 2C: 7,688 rockfish, 60% of the statewide total. Area 3A accounted for the second highest total: 4,426 rockfish, 34% of the total. Harvests were very small by SHARC holders fishing in other regulatory areas; their combined harvest of 738 rockfish was about 6% of the statewide total. Compared to 2009, when 13,315 rockfish were harvested, the incidental rockfish harvest in the subsistence halibut fishery in 2010 was down by 4%. The 2010 estimated rockfish harvest was also lower than the estimate for 2004 (19,001 rockfish), 2006 (16,945), 2007 (15,266), and 2003 (14,870 rockfish), but higher than 2005, when the incidental rockfish harvest was 12,395.

Table 10 also reports location of incidental rockfish harvests in 2010 within geographic subareas. Most of the harvest occurred in southern Southeast Alaska (3,956 rockfish), the Sitka LAMP area (2,644 rockfish), the Kodiak Island road system (1,528 rockfish), the remainder of northern Southeast Alaska (1,088 rockfish), other Kodiak Island locations (1,101 rockfish), Cook Inlet (612 rockfish), Prince William Sound (611 rockfish), and the Yakutat area (574). Incidental rockfish harvests totaled 402 fish in the eastern Aleutians east subarea, and 209 in the lower Alaska Peninsula subarea.

LINGCOD HARVESTS

Survey respondents were asked to estimate the number of lingcod they harvested while subsistence fishing for halibut in 2010. Note that these survey results do not provide an estimate of the total subsistence lingcod harvest by SHARC holders in 2010 because they might have harvested lingcod while fishing for species other than halibut. Also, other fishers in the communities who did not hold SHARCs might have fished for or harvested lingcod, so that these incidental harvests represent only a portion of the total 2010 subsistence harvest. The Division of Subsistence Community Subsistence Information System (CSIS) includes estimates of lingcod harvests for communities in which comprehensive household surveys have been administered.

It should also be noted that the label "bycatch" for these harvests might be misleading.[18] Lingcod are used for subsistence purposes throughout their range (CSIS). It is highly likely that most lingcod harvested incidentally in the subsistence halibut fishery are utilized as a subsistence food. It is very unlikely that many lingcod caught in this subsistence fishery are discarded.

The statewide estimated incidental lingcod harvest in the subsistence halibut fishery in 2010 was 2,864 fish by 732 fishers (Table 10). This is an average of about 0.6 lingcod per fisher for all subsistence halibut fishers who participated in the SHARC program, and 3.9 lingcod per fisher for those who had a lingcod harvest. Of SHARC holders who subsistence fished for halibut in 2010, 15% harvested at least one lingcod while halibut fishing. Almost all of the subsistence halibut fishers who harvested lingcod fished in Area 2C (Southeast Alaska) (493; 67%) and Area 3A (Southcentral Alaska) (218; 30%). (See Appendix Table E-7 for estimated lingcod harvests by tribe and by nontribal rural community SHARC holders.)

As illustrated in Figure 30 and Figure 31, most of the incidental lingcod were harvested in Area 2C: 1,800 lingcod, 63%. Area 3A fishing locations accounted for the second highest total: 880 lingcod, 31%. In 2003–2009, an estimated 3,298, 4,407, 2,355, 3,486, 3,402, 3,479, and 3,390 lingcod, respectively, were harvested in the subsistence halibut fishery. The 2010 estimated harvest represents a decrease of 16% in the incidental lingcod harvest compared to 2009, and a decrease of 16% over the previous 7-year average (2003–2009).

[18] See footnote 17 for definitions of "bycatch" and "incidental catch."

Table 10 also reports the location of incidental lingcod harvests by geographic subarea in 2010. Most of this harvest occurred in Area 2C (Southeast Alaska): the Sitka LAMP area (920 lingcod), southern Southeast Alaska (719 lingcod), and northern Southeast Alaska waters outside the Sitka LAMP (161 lingcod). Incidental lingcod harvests totaled 260 lingcod along the Kodiak Island road system, 102 lingcod in the lower Alaska Peninsula, 242 lingcod in other Kodiak area waters, 144 in Cook Inlet, and 142 in the Yakutat area. Harvests totaled fewer than 100 lingcod in each of the other geographic subareas.

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CHAPTER 3: DISCUSSION

COMPARISONS WITH OTHER HARVEST ESTIMATES

As discussed in the first report for the SHARC survey project (Fall et al. 2004:19–22), comparing the statewide subsistence halibut harvest estimates generated by the SHARC survey with subsistence halibut harvest estimates from projects conducted in previous years continues to be difficult. The primary reason, as noted in Chapter 1, is that the regulations that allow subsistence halibut fishing in Alaska waters using traditional gear, such as longlines with more than 2 hooks, and that removed the restrictive daily harvest limit of 2 fish, have been in place for only 8 years, since May 2003.

Although the ADF&G Division of Subsistence has conducted systematic household surveys in many rural Alaska communities that have traditional uses of halibut, these studies pertain to different harvest years. In addition, there are many communities, especially in western Alaska, where such surveys have not been conducted. Also, these Division of Subsistence studies have attempted to estimate the total halibut harvest for home use by including harvests conducted under sport fishing rules and harvests removed from commercial fisheries for home use. Typically, these studies have also collected harvests by gear type, such as rod and reel or "other gear." When using these data sets, therefore, it is not possible to separate the "sport" harvest from the "subsistence" harvest for past harvest years, especially in larger rural communities with a diverse population where at least a segment of the population perceives some of their halibut fishing effort as recreational (see, for example, the discussions about Sitka and Kodiak, below).

Furthermore, the statewide subsistence halibut harvest estimates from the SHARC postal survey include only those subsistence harvests by individuals who obtained SHARCs. The estimates do not include total noncommercial harvests, such as those accomplished under sport fishing regulations, or halibut removed by commercial fishers for use by their households or for noncommercial sharing.[19] Thus they can be only partial estimates of the total harvest of halibut for home use by rural Alaska residents and cannot be directly compared to estimates from previous Division of Subsistence studies.

The report for the first year of this project included a detailed discussion of previous efforts to develop an estimate of subsistence halibut harvests at the regional and statewide levels. The report suggested that the 2003 SHARC survey estimates were not markedly different from estimates based on Division of Subsistence household survey data as reported in the Community Subsistence Information System (CSIS). We will not repeat that full discussion here.[20] However, the report also concluded that because of the limitations associated with the previous subsistence harvest estimates at the statewide level, until a time series is developed based upon the SHARC survey results, discussion of harvest trends in the subsistence halibut fishery will remain speculative. A discussion comparing the project findings for 2010 with those for 2003–2009 appears in Chapter 4.

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[19] Since 1995, halibut removed for personal use by commercial fishers from their commercial harvests must be weighed and accounted for within the commercial quota share program (Gregg Williams, IPHC, personal communication).

[20] For example for 2000, the IPHC estimated 439,000 pounds net weight for Alaska "personal use" (noncommercial, nonrecreational) harvests (*in* Wolfe 2001). The IPHC estimate is based upon a methodology described by Trumble *n.d.*. The IPHC method assumed that 50% of Alaska Native rod and reel halibut harvests, as reported in ADF&G household surveys, are "sport" and 50% "personal use," and that 75% of the non-Native rod and reel harvests are "sport" and 25% "personal use" (Trumble *n.d.*:62). No justification for these assumptions is provided, and changing these sport-to-personal-use ratios can result in a very different estimate for the "personal use" halibut harvest. In a report to the Alaska Board of Fisheries in May 2001, using the same data source as the IPHC, Wolfe (2001) estimated that the subsistence halibut harvest in Alaska "probably ranges between 400,000 and 1,000,000 pounds (round weight) annually," based on harvest data in the CSIS/CPDB. This is an estimated harvest of 300,000 to 750,000 pounds net weight. See Fall et al. 2004:19–21 for discussion of Wolfe's methods. In the original analysis for the subsistence halibut program, the NPFMC estimated the Alaska subsistence halibut harvest at 1.5 million pounds net weight (68 FR 18145, April 15, 2003, EA/RIR [NPFMC 2003]).

COMMUNITY CASE STUDIES

Despite the limitations discussed above, it is possible to compare some communities' previous noncommercial halibut harvest estimates with estimates generated from the SHARC survey, keeping in mind the different sampling methods, uncertainty in the separation of subsistence and recreational harvests, and the relative newness of the regulatory changes enacted in 2003. Prior Division of Subsistence research has suggested that such communities, presented here as case studies, can also be seen as representative of other communities of similar size and geographic location. In the following evaluation, emphasis is placed on larger communities, since, as discussed in Chapter 2, a small number of large communities have accounted for most of the statewide subsistence halibut harvest, according to the SHARC surveys. A comparison of the harvest estimates for these communities helps to determine the reliability of the statewide estimate generated by the SHARC survey, as well as survey performance. Because, as noted in Chapter 1, not all tribal SHARC holders live in the community where their tribal headquarters is located, the following comparisons are based upon place of residence of the SHARC holder, in order to be consistent with earlier division studies. Table 11 reports selected project findings for 2003–2010 in the case study communities discussed below. Appendix tables E-4, E-5, and E-6 report project results for 2010 for all communities, based upon residence of SHARC holders.

Sitka (Regulatory Area 2C)

Sitka had a population of 8,835 people in 2000, 2,178 of whom were Alaska Native (U. S. Census Bureau 2001). In 2010, Sitka's population was 8,881, including 2,184 Alaska Natives (Table 1; ADLWD 2011). Sitka was the second largest rural community eligible to participate in the SHARC halibut fishery in 2010, and had the second highest number of SHARCs issued, at 1,635 (Table 11) (about 15% of the Alaska total). Of these, 1,363 were issued to nontribal residents of Sitka, and 272 to tribal members; the latter total was down from 470 in 2007 (Fall and Koster 2008:22). Members of the Sitka Tribe of Alaska (STA) held 289 SHARCs in 2010, compared to 485 in 2007, 273 in 2008, and 288 in 2009. It is important to remember that some STA members live in communities other than Sitka and that members of other Alaska tribes live in Sitka. Because of the relatively large number of SHARC holders who live there, developing a reliable subsistence halibut harvest estimate for Sitka is essential for the success of this subsistence harvest assessment program. Sitka residents' response rates to the survey have also been substantial during the 8 years of the project: 75% in 2003, 72% in 2004, 68% in 2005, 69% in 2006, 68% in 2007, 71% in 2008, 67% in 2009, and 62% in 2010.

The Division of Subsistence has generated 2 estimates of noncommercial halibut harvests in Sitka for years prior to the 2003 authorization of subsistence halibut fishing (Table 12). One is for the 1987 study year, in which the estimated total noncommercial halibut harvest was 193,335 lb (net weight) (±22%), or 180,982 lb if fish removed from commercial harvests are excluded. This noncommercial total includes only harvests reported by surveyed persons as taken with rod and reel; data on harvests using "other methods" such as longlines, which were not allowed at that time in the subsistence fishery, were not collected. An estimated 1,252 Sitka households had at least one member who fished noncommercially for halibut in 1987. For 1996, the total estimated noncommercial harvest was 165,772 lb (net weight) (±28%), and 149,244 lb with commercial removals excluded. In 1996, an estimated 943 Sitka households had at least one member who fished noncommercially for halibut.

For 2010, the estimated subsistence harvest of halibut, by both tribal SHARC holders who live in Sitka (most, but not all, of whom are members of the STA) and by other residents of Sitka (1,635 SHARC holders), was 82,728 lb (net weight) (3,951 fish). This was the second highest of any community (behind Kodiak), and accounted for 10% of the statewide total subsistence halibut harvest. Of Sitka's total subsistence halibut harvest, 74,394 lb (90%) was taken with setline gear, and 8,334 lb (10%) was taken with hand-operated gear. Adding sport harvests by Sitka SHARC holders (9,257 lb) produces a noncommercial estimate of 91,985 lb (net weight). Of all SHARC holders from Sitka, an estimated 755 subsistence fished for halibut in 2010. Of these, 700 used setline gear and 218 used hand-operated gear.

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Also, an estimated 228 SHARC holders from Sitka sport fished for halibut in 2010. Thus the estimated total number of SHARC holders living in Sitka who fished for halibut in either the subsistence or recreational fishery in 2010 was 849 (Table 11).

Estimated subsistence and sport halibut harvests by Sitka SHARC holders in 2010 were lower than estimates for any of the previous 7 study years and continued a downward trend that began in 2006 (Table 11). A total of 1,639 Sitka residents had SHARCs in 2003; 1,871 in 2004; 1,974 in 2005; 1,895 in 2006; 1,954 in 2007; 1,662 in 2008; and 1,731 in 2009, compared to 1,635 in 2010. Subsistence harvests by all Sitka SHARC holders were 174,880 lb (net weight) in 2003 compared to 166,474 lb in 2004, 146,319 lb in 2005, 163,372 lb in 2006, 142,049 lb in 2007, 109,581 lb in 2008, 97,424 lb in 2009, and 82,728 lb in 2010; the 2010 estimate was 15% lower than the estimate for 2009 and 53% lower than the estimate for 2003. A decline also occurred in the number of halibut harvested: 6,621 in 2003, 6,583 in 2004, 6,062 in 2005, 6,691 in 2006, 6,304 in 2007, 5,513 in 2008, 4,834 in 2009, and 3,951 in 2010 (18% lower than 2009 and 40% lower than 2003). Adding sport harvests of halibut by SHARC holders to subsistence harvest totals results in noncommercial harvest estimates for Sitka that are similar among the first 4 years of the project: 207,288 lb for 2003, 192,303 lb in 2004, 202,232 lb for 2005, and 186,404 lb in 2006, but the total noncommercial harvests have declined annually since then, to 91,985 lb in 2010. According to the SHARC survey, fewer Sitka residents participated in the subsistence halibut fishery in 2010 (755) than any other study year, but this decline in participation (down 11% from 2009 and 8% compared to 2003) did not match the decline in harvests. There were 849 SHARC holders who participated in either the subsistence or sport fisheries for halibut in 2010, lower than any other study year: 956 in 2003, 1,026 in 2004, 987 in 2005, 1,036 in 2006, 1,010 in 2007, 932 in 2008, and 941 in 2009.[21]

In summary, this comparison suggests that the 2003–2010 subsistence halibut harvest estimates for Sitka, based on the SHARC survey, appear reasonable. The estimates for 2003–2007 were generally similar to those generated from previous face-to-face household surveys conducted in 1987 and 1996. However, the SHARC survey data for 2008, 2009, and 2010 show a decline in halibut harvests in Sitka compared to previous project years. A decline in the number of SHARCs held by tribal members in Sitka may account, at least in part, for lower 2008, 2009, and 2010 estimated harvests, although average harvests by nontribal SHARC holders in Sitka were also lower in 2008–2010 compared to 2003–2007 (Table 13). For example, nontribal SHARC holders from Sitka who fished for halibut in 2009 had an average harvest of 111 lb per fisher, the lowest of the 8 project years and 28% below the previous 7-year average of 153 lb per fisher. Tribal SHARC holders from Sitka who fished in 2010 also had much lower harvests than previous years: only 105 lb per fisher, which is 54% below the previous 7 year average of 227 lb. These findings suggest that the estimates of declining harvests in Sitka are not a result of inadequate sampling or less participation in the SHARC program. Rather, the study finding show that subsistence halibut harvests in Sitka have declined from 2005 through 2010. The causes of this decline require further investigation.

Petersburg (Regulatory Area 2C)

In 2000, Petersburg had a population of 3,224, including 388 Alaska Natives (U. S. Census Bureau 2001); in 2010, the population had dropped to 2,948, including 390 Alaska Natives (Table 1; ADLWD 2011). Prior to the 2003 authorization of federal subsistence halibut fishing, the Division of Subsistence produced 2 estimates of noncommercial halibut harvests by Petersburg residents, based on household surveys in 1987 and 2000 (Table 14). In the 1987 project, a random sample of 49 of the 1,123 households in Petersburg was interviewed (4%), which generated a subsistence harvest estimate of 119,176 lb of halibut (net weight) (±51%); of this, 11,728 lb were estimated to have been removed from commercial

[21] Following a recommendation from the first project year (Fall et al. 2004:31), data from the ADF&G Division of Sport Fish *Statewide Harvest Survey* (SWHS) about sport halibut harvests by Sitka residents were analyzed for additional background on halibut fishing in the community and discussed in the report for the 2004 project year (Fall et al. 2005:23-24). An updated analysis has not been prepared for this report.

harvests, resulting in a total noncommercial harvest estimate of 107,448 lb. As with Sitka, the 1987 project in Petersburg collected noncommercial harvest data only for halibut taken with rod and reel. Of the 1,123 households in Petersburg, 54% were estimated to have at least one member who fished for halibut noncommercially in 1987, which was an estimated 604 halibut fishers (CPDB). In 2000, Petersburg residents were estimated to have harvested 55,974 lb (net weight) of noncommercial halibut (±39%). Of this, 6,951 lb were estimated to have been removed from commercial harvests, for a subsistence harvest of 49,023 lb, all of which was taken with rod and reel. In 2000, it was estimated that 468 Petersburg households had at least one member who fished for halibut for home use.

For 2010, the estimated subsistence harvest of halibut by Petersburg residents with SHARCs (961 SHARC holders) was 47,266 lb (net weight), very similar to the 46,766 lb harvested by 1,041 SHARC holders in 2009 and the 46,600 lb harvested by 985 SHARC holders in 2008 (Table 11). In 2007, 1,123 SHARC holders in Petersburg harvested 47,517 lb of halibut in the subsistence fishery; in 2006, 1,082 SHARC holders harvested 53,682 lb; in 2005, 1,197 SHARC holders harvested 61,372 lb; in 2004, 1,187 SHARC holders harvested 71,784 lb; and in 2003, 1,047 SHARC holders harvested 55,718 lb. Of the total 2010 subsistence halibut harvest, 33,951 lb (72%) was harvested with setline gear and 13,315 lb (28%) with hand-operated gear. This was an increased portion of the harvest taken with longlines compared to 2009, when 30,105 lb (64%) was harvested with setline gear and 16,661 lb (36%) with hand-operated gear. In 2008, 67% of the subsistence halibut harvest by Petersburg residents was taken with setline gear, and 33% with hand-operated gear; in 2007, 67% with setline gear, and 33% with hand-operated gear; 66% with setline gear and 34% with hand-operated gear in 2006; 72% with setline gear and 28% with hand-operated gear in 2005; and about 75% taken with setline gear and 25% with hand-operated gear in both 2003 and 2004.

In 2010, Petersburg SHARC holders also harvested 13,251 lb of halibut they classified as sport harvested, compared to 13,619 lb in 2009. This gives a total noncommercial halibut harvest estimate for Petersburg SHARC holders of 60,517 lb in 2010, compared to 60,385 lb in 2009, the 2 lowest totals over the 8 years of the project. In 2008, the sport harvest contributed 17,506 lb to the total noncommercial halibut harvest of 64,108 lb; 15,177 lb in 2007, for a total noncommercial halibut harvest estimate of 62,694 lb; 17,351 lb in 2006, for a total noncommercial halibut harvest estimate of 71,033 lb; 23,289 lb in 2005 for a total noncommercial harvest estimate of 84,661 lb; 26,408 lb in 2004 for a total noncommercial harvest estimate of 98,192 lb; and 19,611 lb in 2003 for a total noncommercial halibut harvest estimate of 75,329 lb (Table 11).

In 2010, an estimated 409 Petersburg SHARC holders harvested halibut in the subsistence fishery (323 with setline gear and 209 with hand-operated gear). This compares to 418 fishers in 2009 (323 with setline gear and 224 with hand-operated gear); 393 fishers in 2008 (285 with setline gear and 207 with hand-operated gear); 386 fishers in 2007 (274 setline and 191 hand-operated gear); 416 fishers in 2006 (300 setline and 222 hand-operated gear); 436 fishers in 2005 (338 setline gear and 175 used hand-operated gear); 482 fishers in 2004 (322 setline gear and 206 hand-operated gear); and 415 subsistence halibut fishers in 2003 (330 setline gear and 138 hand-operated gear). In 2010, an estimated 256 Petersburg SHARC holders sport fished for halibut, as did 247 in 2009, 279 in 2008, 264 in 2007, 246 in 2006, 312 in 2005, 351 in 2004, and 268 in 2003. An estimated total of 501 Petersburg SHARC holders either subsistence or sport fished for halibut in 2010, as did 513 in 2009, 515 in 2008, 516 in 2007, 529 in 2006, 569 in 2005, 617 in 2004, and 523 in 2003 (Table 11).

Because some Petersburg residents without SHARCs likely sport fished for and harvested halibut, the 2003–2010 estimates of noncommercial halibut harvests by Petersburg residents generated by the SHARC survey appear consistent with the 1987 estimate based on household interviews, although the SHARC estimate is slightly higher than the in-person estimate for 2000, the year that state regulations restricted subsistence fishing to handlines or rods and reels with no more than 2 hooks. In that year, no Petersburg households reported taking halibut for home use with any gear other than rod and reel. In

contrast, an estimated 330 used setline gear in 2003, based on the SHARC survey, and 322 did so in 2004, 338 in 2005, 300 in 2006, 274 in 2007, 285 in 2008, 323 in 2009, and 323 in 2010 (Table 11, Table 13).

Cordova (Regulatory Area 3A)

In 2000, Cordova had a population of 2,454 people, including 368 Alaska Natives (U. S. Census Bureau 2001); Cordova's population in 2010 was 2,239, with 344 Alaska Natives (Table 1; ADLWD 2011). Before 2003, there were 6 Division of Subsistence household surveys that estimated noncommercial halibut harvests in Cordova (Table 15). After subtracting fish removed from commercial harvests for home use, estimated noncommercial halibut harvests by Cordova residents ranged from 25,609 lb (net weight) (±33%) in 1991 to 120,221 lb (±62%) in 1988, with an average over the 6 project years of 57,285 lb. The estimated number of Cordova households with at least one member fishing noncommercially for halibut ranged from 228 in 1985 to 401 in 1992, with a mean of 325 households (CSIS).

SHARC survey subsistence halibut harvest estimates and participation estimates for Cordova residents for 2003 were lower than might be expected from previous research (Fall et al. 2004:24–25). In 2003, 358 residents of Cordova obtained SHARCs (Table 11). Of these, an estimated 102 subsistence fished (68 with setline gear, 40 with hand-operated gear), 144 reported that they sport fished for halibut, and 194 fished for halibut either under the new federal subsistence halibut provisions or in the sport fishery. The estimated subsistence harvest from the SHARC survey was 15,498 lb (net weight) (7,613 lb [49%] with setline gear, 7,885 lb [51%] with hand-operated gear), and there were an additional 11,534 lb estimated taken by SHARC holders while sport fishing. The total of 27,032 lb was about 47% of the average for previous project years.

Based on these comparisons, the final report for 2003 suggested that the SHARC survey had underestimated the amount of halibut harvested by Cordova residents for home use, perhaps because not all subsistence fishers in Cordova obtained SHARCs in 2003. The results of the survey for 2004 also supported this conclusion (Fall et al. 2005:25–26). A total of 526 Cordova residents had obtained SHARCs by the end of 2004 (an increase of 47%) (Table 11). An estimated 262 Cordova SHARC holders subsistence fished for halibut in 2004, up 157% from 2003. Of these, 174 fished with setline gear (up 156%) and 97 used hand-operated gear. The estimated subsistence halibut harvest by Cordova residents in 2004 was 40,640 lb (net weight), an increase of 163% over 2003. Sport harvests by Cordova SHARC holders (an estimated 174 of whom sport fished for halibut in 2004) added 12,149 lb to the community harvest for 2004, for a total estimate of 52,789 lb of halibut harvested noncommercially by 325 fishers. This total was an increase of 95% over 2003, and was about 92% of the average for the 6 survey years prior to 2003 (and exceeded the total for 3 of those 6 years). Given that some Cordova residents likely obtained halibut for home use exclusively in the sport fishery and without obtaining SHARCs, the SHARC survey estimate for 2004 appeared consistent with earlier estimates of subsistence halibut harvests in Cordova.

Findings for Cordova for 2005 were much like those for 2004 and supported the conclusions of the 2004 final report. As shown in Table 11, 602 Cordova residents held SHARCs in 2005, continuing the growth that had occurred in 2004, but at a slower pace. Subsistence halibut harvests totaled 47,141 lb, up about 16% from 40,640 lb in 2004. In 2004, 73% of the total was harvested with setline gear, as was 74% in 2005. In 2005, 281 Cordova residents obtained SHARC cards and went subsistence fishing, compared to 262 in 2004. Cordova SHARC holders harvested 10,519 lb of halibut while sport fishing in 2005, for a total noncommercial harvest estimate of 57,660 lb. This total was similar to the estimate for 2004 (a combined total of 52,789 lb in the subsistence and sport fishery) and approximated the mean harvest of 57,285 lb estimated in the 6 harvest survey project years.

The estimated subsistence halibut harvest for Cordova in 2006 was 29,027 lb, a decline from 2004 (40,640 lb) and 2005 (47,141 lb) but still about double the 2003 estimated harvest (15,498 lb) (Table 11). The reasons for this decline remain uncertain. The estimated sport halibut harvest by Cordova SHARC holders in 2006 was 7,020 lb, lower than estimates in the first 3 years of the SHARC program. In total,

Cordova SHARC holders harvested an estimated 36,047 lb of noncommercial halibut in 2006. This total was substantially lower than the noncommercial estimates for 2004 (52,789 lb) and 2005 (57,660) lb, but was higher than that for 2003 (27,032 lb) (Table 11). The 2006 estimate was higher than estimates generated during previous in-person survey efforts in 1985 and 1991, but lower than the average for the 6 years for which SHARC data are available (Table 14).

Estimated subsistence halibut harvests by Cordova SHARC holders declined slightly in 2007 from 2006 levels, to 28,716 lb, with most of this (21,683 lb; 76%) taken with setline gear. Sport harvests of halibut by Cordova SHARC holders declined to 4,203 lb in 2007, the lowest of the 5 previous project years. The total noncommercial harvest estimate for 2007 by Cordova SHARC holders was 32,919 lb of halibut, lower than any project year except 2003 and also lower than the average for the previous 6 in-person surveys (Table 11, Table 14).

For 2008, the estimated subsistence harvest of halibut in Cordova was 27,547 lb, lower than any SHARC project year since 2003 but similar to estimates for 2006 and 2007 (Table 11). Of the 2008 subsistence harvest, 81% (22,301 lb) was harvested with setline gear. Sport harvests of halibut by Cordova SHARC holders totaled 5,562 in 2008, lower than during any SHARC project year except 2007. The 2008 total noncommercial harvest of halibut by Cordova SHARC holders was 33,109 lb of halibut, which was the second lowest (after 2007) since 2003. The 2008 estimated harvest was only 58% of the annual average for pre-2003 project years, although it is higher than either 1985 or 1991 (Table 14).

The estimated subsistence halibut harvest for Cordova for 2009 was 23,364 lb, the lowest since 2003 and continuing a declining trend that began in 2005 (Table 11) Of the 2009 subsistence harvest, 76% (17,766 lb) was harvested with setline gear and the remaining 24% (5,598 lb) with hand-operated gear. Sport harvests of halibut by Cordova SHARC holders in 2009 added 3,868 lb, the lowest total over the first 7 years of the project. The 2009 total noncommercial harvest of halibut by Cordova SHARC holders was 27,232 lb, the lowest since 2003. The 2009 estimated harvest was 47% of the annual average for pre-2003 project years, and higher than only 1991 (Table 14).

The estimated subsistence halibut harvest for Cordova for 2010 was 28,428 lb, the highest since 2007 and reversing the declining trend that began in 2005 (Table 11) Of the 2010 subsistence harvest, 90% (25,579 lb) was harvested with setline gear and the remaining 10% (5,849 lb) with hand-operated gear. Sport harvests of halibut by Cordova SHARC holders in 2010 added 5,837 lb. The 2010 total noncommercial harvest of halibut by Cordova SHARC holders was 34,265 lb, the highest since 2006. The 2010 estimated harvest was 60% of the annual average for pre-2003 project years, and higher than only 1985 and 1991 (Table 14).

Fewer Cordova residents held SHARCs in 2010 (557) than in 2009 (599), 2008 (587), 2007 (615), 2006 (607), and 2005 (602). Fewer Cordova residents reported that they participated in the subsistence halibut fishery in 2010 (235) than in any of the previous study years except 2009 (234). The estimated number of Cordova SHARC holders who sport fished for halibut (106) was lower than any year from 2003–2009. In 2010, 261 Cordova SHARC holders fished noncommercially for halibut, down from 269 in 2009, 292 in 2008, and 315 in 2007. In 2010, fewer Cordova SHARC holders participated in any noncommercial halibut fishing than in any year since the new regulations came into effect except 2003 (Table 11).

Port Graham (Regulatory Area 3A)

Port Graham, which is located in Lower Cook Inlet, had a population of 171 in 2000, including 151 Alaska Natives (U. S. Census Bureau 2001). Port Graham's population in 2010 was 177, with 160 Alaska Natives (Table 1; ADLWD 2011). It is presented as a case example of the smaller, predominantly Alaska Native communities in regulatory areas 3A and 3B that depend heavily on subsistence harvests of fish and wildlife resources. The division has produced estimates of subsistence halibut harvests by Port Graham residents based on household surveys for 7 project years (Table 16). Excluding 1989, the year of the *Exxon Valdez* oil spill, Port Graham's noncommercial halibut harvests ranged from 4,451 lb (net weight)

(±14%) in 1993 to 11,232 lb (±14%) in 1992, with a 6-year average of 7,591 lb (net weight) (Figure 32). Again excluding 1989, an estimated average of 38 Port Graham households had at least one member who subsistence fished for halibut in the project years in the late 1980s and 1990s.

In 2010, a total of 47 Port Graham residents held SHARCs (excluding Port Graham tribal members who do not live in Port Graham), the same total as 2009 and similar to the total of 48 SHARC holders in 2008. In 2010, an estimated 30 Port Graham residents participated in the subsistence halibut fishery, with 23 using setline gear and 18 hand-operated gear; 5 said they went sport fishing for halibut. In comparison, in 2009, an estimated 35 Port Graham residents participated in the subsistence halibut fishery, with 22 using setline gear and 31 hand-operated gear; 9 said they went sport fishing for halibut. In 2008, an estimated 30 Port Graham residents subsistence fished for halibut, with 13 using setline gear and 23 using hand-operated gear. Also, 2 said they had sport fished for halibut in 2008. In 2007, of 59 SHARC holders in Port Graham, an estimated 36 subsistence fished for halibut, with 22 using setline gear and 28 using hand-operated gear. Also, 4 said they sport fished for halibut in 2007. In 2006, 30 Port Graham SHARC holders subsistence fished for halibut, with 9 using setline gear and 24 using hand-operated gear. In 2005, 18 Port Graham SHARC holders subsistence fished for halibut, with 8 using setline gear and 18 using hand-operated gear. Nine Port Graham SHARC holders sport fished for halibut in 2005. In 2004, 42 Port Graham SHARC holders subsistence fished for halibut, with 15 using setline gear and 31 using hand-operated gear; 11 said they sport fished for halibut. In 2003, 35 Port Graham SHARC holders subsistence fished for halibut (10 used setline gear, 28 used hand-operated gear), and 3 said they sport fished for halibut (Table 11). The findings for the 2003–2010 SHARC surveys were thus consistent with levels of participation found in the noncommercial halibut fisheries during previous studies in Port Graham, although estimated participation was lower in 2005, according to the SHARC survey.

The subsistence halibut harvest estimate for Port Graham in 2010 was 7,222 lb (Table 11). Of this, 5,011 lb (69%) were harvested with setline gear and 2,211 lb (31%) with hand-operated gear. Adding 267 lb that Port Graham SHARC holders harvested in the sport halibut fishery results in a total community noncommercial harvest estimate of 7,489 lb in 2010. Harvests in 2010 were up compared to 2009, when Port Graham SHARC holders harvested an estimated 6,426 lb of halibut in the subsistence fishery, with 1,454 lb taken with setline gear and 4,973 lb with hand-operated gear, and an additional 197 lb in the sport fishery. Harvests in 2010 were also higher than those in 2006, when Port Graham SHARC holders harvested an estimated 6,194 lb of halibut, with 2,397 lb taken with setline gear and 3,797 lb with hand-operated gear. (No sport harvests were reported for 2006). Harvests in 2010 were lower than those of 2008 – 9,097 lb in the subsistence fishery (6,896 lb by set line, 2,200 with hand-operated gear) and 51 lb in the sport fishery; and 2007—8,493 lb in the subsistence fishery (5,347 lb by setline, 3,146 with hand-operated gear) and 233 lb in the sport fishery. In the first 3 years of the SHARC program (2003–2005), estimated subsistence halibut harvests were higher in Port Graham than in 2006–2010. In 2005, Port Graham SHARC holders harvested an estimated 11,127 lb of halibut, with 7,938 lb taken with setline gear and 3,190 lb with hand-operated gear. In 2004, Port Graham's estimated subsistence halibut harvest was 9,181 lb (net weight) with 4,425 lb (48%) harvested with setline gear and 4,755 lb (52%) with hand-operated gear. In 2003, the estimated halibut harvest was 11,454 lb (net weight), with 4,398 lb (38%) harvested with setline gear and 7,056 lb (62%) with hand-operated gear (Table 11).

Total noncommercial halibut harvest estimates for Port Graham (subsistence plus sport harvests reported by SHARC holders) for 2003–2005 were similar to the highest estimate generated prior to the SHARC survey (11,232 lb in 1992) (Table 11), and they also exceeded the average of previous project years of 7,591 lb. This finding was not unexpected: Port Graham has traditionally used setlines with multiple hooks to harvest halibut as well as hand-operated gear (Stanek 1985:67–69,151). With May 2003 regulations finally consistent with traditional harvest methods, residents of Port Graham and other communities with similar traditions could fish with setline gear and hand-operated gear, and thus their

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reported subsistence halibut harvests are probably similar to historical levels.[22] However, the 2006 estimate of 6,194 lb and the 2009 estimate of 6,623 lb were lower than those for 2003–2005, and lower than the average of the prior in-person survey estimates for 1987–1997. The 2007 and 2008 estimates were also lower than 2003–2005, but above the average of the earlier survey years; the estimate for 2010 was very close to the pre-2003 annual average (Table 15). The reasons for the lower harvests in 2006–2010 compared to 2003–2005 are uncertain, but a decline in the community's population in the mid 2000s may be part of the explanation.

Kodiak City and Road System (Regulatory Area 3A)

"Kodiak" in this report includes the city of Kodiak (population 6,334 in 2000, including 829 Alaska Natives; population 6,130 including 848 Alaska Natives in 2010) and those portions of the Kodiak Island Borough connected to the city of Kodiak by road. This area had a population of 12,973 people in 2000, including 1,697 Alaska Natives (U. S. Census Bureau 2001). The population in 2010 was 12,824, with 983 Alaska Natives (Table 1; ADLWD 2011). This is the largest rural community eligible to participate in the Alaska subsistence halibut fishery.

Based on Division of Subsistence household surveys, estimates of halibut harvests for home use are available in the CSIS for the entire Kodiak road system population for 1982 and 1991. Estimates for Kodiak city residents alone are available for 1992 and 1993, and these can be expanded to produce a total for the entire road system population (Table 17). Excluding fish removed from commercial catches for home use, noncommercial halibut harvests by Kodiak road system residents ranged from 247,283 lb (usable weight) (±30%) in 1991 to 511,254 lb (±33%) in 1993. The average for the 4 available project years was 366,682 lb; of this, 338,476 lb (92%) was taken with rod and reel, most likely consistent with sport fishing regulations. On average for the 4 project years, 1,306 Kodiak road system households had at least one member who fished for halibut for home use.

Kodiak residents held 1,702 SHARCs during 2010, down slightly from 1,826 SHARCs during 2009 and 1,725 in 2008 (Table 11). In 2010, an estimated 900 Kodiak SHARC holders subsistence fished for halibut; most (747; 83%) used setline gear. This compares to an estimated 923 subsistence fishers in Kodiak in 2009, of whom 749 (81%) used setline gear; 963 in 2008, of whom 763 (79%) used setline gear; 945 in 2007, of whom 707 (75%) used setline gear; 961 in 2006, of whom 684 (71%) used setline gear; 871 in 2005, 650 of whom (75%) used setline gear; 802 in 2004, 554 (69%) of whom used setline gear; and 646 in 2003, 438 of whom (68%) used setline gear. In 2010, an estimated 539 Kodiak SHARC holders sport fished for halibut, and 1,074 fished for halibut under noncommercial rules. This compares to 2009, when 619 Kodiak SHARC holders sport fished for halibut and 1,139 were involved in noncommercial halibut fishing; 2008, when 693 Kodiak SHARC holders sport fished for halibut and 1,213 were involved in noncommercial halibut fishing; 2007, when 648 sport fished for halibut and 1,157 were involved in noncommercial halibut fishing 2006, when 562 sport fished for halibut and 1,092 were involved in noncommercial halibut fishing; 2005 when 669 sport fished for halibut and 1,116 were involved in any noncommercial halibut fishing; 2004, when 581 sport fished for halibut, and 971 fished for halibut under either subsistence or sport regulations; and 2003, when 498 sport fished for halibut, and 858 either subsistence or sport fished for halibut (Table 11). Given the likelihood that many Kodiak residents continued to fish for halibut under sport fishing regulations in 2003–2010 without obtaining SHARCs, the estimated level of participation in the subsistence fishery based on the SHARC survey appears reasonable when compared to the earlier household survey results.

[22] A cautionary note for Port Graham for 2005 concerns response rate. Only 16 of 52 SHARC holders responded to the 2005 survey (31%) (Fall et al. 2006:52). Further outreach in this community was necessary to improve the response rate and build confidence in the harvest estimates. This outreach occurred in 2007 for the 2006 project year, and a response rate of 66% was achieved.

The estimated subsistence harvest of halibut in 2010 for Kodiak road system area residents was 164,092 lb (net weight), lower than the 2009 estimate of 177,769 lb, the 2008 estimate of 177,334 lb, the 193,633 lb estimated for 2007, 205,822 lb estimated for 2006, 210,828 lb estimated for 2005, and 187,214 lb for 2004, but higher than the 153,254 lb estimated for 2003 (Table 11). In 2010, Kodiak subsistence fishers harvested an estimated 127,816 lb of halibut with setline gear (78%) and 36,275 lb (22%) with hand-operated gear. This compares to 130,802 lb of halibut with setline gear (74%) and 46,966 lb (26%) with hand-operated gear in 2009; 128,226 lb (72%) harvested with setline gear and 49,108 lb (28%) with hand-operated gear in 2008; 135,351 lb (70%) harvested with setline gear and 58,282 lb (30%) with hand-operated gear in 2007; 142,326 lb (69%) harvested with setline gear and 63,496 lb (31%) with hand-operated gear in 2006; 146,781 lb (70%) harvested with setline gear and 64,047 lb (30%) with hand-operated gear in 2005; 131,719 lb (70%) harvested with setline gear and 55,605 lb (30%) with hand-operated gear in 2004; and 101,575 lb taken in 2003 with setline gear (66%) and 51,678 lb (34%) with hand-operated gear. In addition, Kodiak road system SHARC holders harvested an estimated 47,646 lb (net weight) of halibut in 2010 they classified as sport caught, which was below the range of harvests in other years: 64,034 lb in 2009, 72,915 lb in 2008, 68,556 lb in 2007, 64,320 lb in 2006, 82,455 lb in 2005, 73,181 lb in 2004, and 68,170 lb in 2003.

In total, Kodiak SHARC holders harvested 211,738 lb (net weight) of halibut in 2010; this is lower than all previous study years: 241,803 lb of halibut in 2009, 250,249 lb in 2008, 262,189 lb in 2007, 270,142 lb in 2006, 293,283 lb in 2005, 260,395 lb in 2004, and 221,424 lb in 2003 (Table 11). Not surprisingly, the totals for all 8 years of the SHARC survey are lower than those based on household surveys for previous years (except that the 2004, 2005, 2006, 2007, and 2008 SHARC survey estimates are higher than the household survey estimate for 1991) because, as noted, many Kodiak road system residents who fish for halibut likely do not obtain SHARCs and continue to harvest halibut under sport fishing rules. Overall, the 2003–2010 subsistence harvest estimates for Kodiak appear reasonable, but they should be further evaluated using ADF&G Division of Sport Fish *Statewide Harvest Survey* data and with additional years of subsistence harvest survey data.

Sand Point (Regulatory Area 3B)

In 2000, the population of Sand Point was 952, with an Alaska Native population of 421 U. S. Census Bureau 2001). The population in 2010 was 976 with 417 Alaska Natives (Table 1; ADLWD 2011). The only estimate of halibut harvests for home use by Sand Point residents based on Division of Subsistence household surveys prior to 2003 is for 1992 (Fall et al. 1993), at 13,981 lb (net weight). Of this, 6,240 lb were removed from commercial harvests, 6,934 lb were taken with subsistence methods (setline or jigging with a hand-held line) and 807 lb were harvested with rod and reel. The total harvest with noncommercial methods was 7,741 lb. Of the 204 permanent households in the community, 122 harvested halibut for home use; 65 used "subsistence methods," 16 fished with rod and reel, and the rest obtained halibut for home use from their commercial harvests.

At the end of 2003, 73 residents of Sand Point had obtained SHARCs. The estimated subsistence halibut harvest for 2003 was 4,819 lb (net weight), based on the SHARC survey. Of this, 3,409 lb were harvested with setline gear and 1,410 lb with hand-operated gear. Twenty-one Sand Point residents reported that they subsistence fished for halibut in 2003. In addition, 11 Sand Point SHARC holders reported that they harvested an estimated 410 lb of halibut while sport fishing, for a total estimated noncommercial harvest of 5,229 lb of halibut (Table 11). These are lower harvests and levels of participation than might be expected, considering the 1992 survey findings.

By December 31, 2004, 351 Sand Point residents had obtained SHARCs, a very substantial increase over 2003, when 73 obtained SHARCs. The estimated total subsistence halibut harvest was 11,355 lb (net weight). Of this total, 4,360 lb were harvested with setline gear (38%) and 6,996 lb (61%) with hand-operated gear. In total, an estimated 109 Sand Point SHARC holders subsistence fished for halibut in 2004, about 5 times the estimate for 2003. Also, an estimated 50 Sand Point SHARC holders sport fished

for halibut, with an estimated total harvest of 1,384 lb. In total, 121 Sand Point SHARC holders fished for halibut noncommercially in 2004 and had a total estimated harvest of 12,739 lb (net weight) (Table 11). This is more than double the 2003 estimate, and similar to the total community estimate for 1992 (which included halibut removed from commercial harvests). It is likely that the higher estimate for 2004 does not indicate an increased harvest by Sand Point residents over 2003, but rather a more complete estimate due to much larger number of participants in the SHARC program.

A total of 321 Sand Point residents held SHARCs in 2005. The estimated subsistence harvest of halibut increased to 21,901 lb, with 12,201 lb (56%) taken with setline gear and 9,700 lb (44%) caught with hand-operated gear. One-hundred Sand Point residents subsistence fished for halibut in 2005. In addition, 23 sport fished for halibut, adding 1,281 lb for a total noncommercial halibut harvest estimate of 23,182 lb (Table 11). The increase in the total halibut harvest, especially the increase in setline harvests, suggests that Sand Point residents were increasingly participating in the opportunities provided by the federal subsistence halibut fishery.

In 2006, the number of Sand Point residents with SHARCs increased to 365. The estimated number of SHARC holders who subsistence fished for halibut also increased, to 133 from 100 in 2005 and 109 in 2004. The estimated number of Sand Point SHARC holders subsistence fishing with setlines also increased notably to 59 in 2006, compared to 35 in 2005 and 25 in 2004. The number fishing with hand-operated gear rose slightly to 87 in 2006, from 77 in 2005 and 74 in 2004. The estimated subsistence halibut harvest by Sand Point residents in 2006 was 20,214, similar to the estimate for 2005 of 21,901. In 2006, 37% (7,406 lb) of the subsistence halibut were harvested with setline gear and 63% (12,809 lb) with hand-operated gear. In addition, an estimated 29 Sand Point SHARC holders sport fished for halibut in 2006, with an estimated harvest of 6,300 lb, up substantially from 1,281 lb of sport harvested halibut in 2005 and 1,384 lb in 2004. As a result of the higher estimated sport harvests of halibut by Sand Point SHARC holders in 2006, the total estimated noncommercial harvest of halibut increased to 26,514 lb from 23,182 lb in 2005 and 12,739 lb in 2004 (Table 11).

Subsistence halibut fishing patterns in Sand Point in 2007 were generally similar to those of 2006. During any part of 2007, 364 Sand Point residents held SHARCs, and 138 used them to subsistence fish for halibut. Of these, 49 used setline gear and 113 used hand-operated gear. The total estimated subsistence halibut harvest in 2007 was 24,615 lb, up slightly from 2006 and the highest estimate for the 5 years of the project. The subsistence harvest was about evenly split between setline gear (13,278 lb; 54%) and hand-operated gear (11,337 lb; 46%). An estimated 16 Sand Point SHARC holders also went sport fishing for halibut and they harvested an estimated 3,034 lb. In total, the noncommercial halibut harvest at Sand Point in 2007 was 27,649 lb, with 138 people involved in this harvest (Table 11).

The results of the SHARC survey for Sand Point for 2008 found subsistence halibut fishing patterns similar to those of 2006 and 2007. During 2008, 342 Sand Point residents held SHARCs, and 130 subsistence fished for halibut. Of these, 71 used setline gear and 88 used hand-operated gear. The total estimated subsistence halibut harvest in 2008 was 25,013 lb, up slightly from 2007 and the highest estimate for the 6 years of the project. Setline gear accounted for 15,766 lb (63%) and hand-operated gear added 9,247 lb (37%). An estimated 19 Sand Point SHARC holders also went sport fishing for halibut and they harvested an estimated 2,195 lb. In total, the noncommercial halibut harvest estimate at Sand Point in 2008 was 27,208 lb, with 132 people involved in this harvest (Table 11).

The majority of SHARCs issued to Sand Point residents expired during 2008 and were not renewed. The number of active SHARCs during 2009 was 137, down 60% from the 342 active SHARCs in 2008. Correspondingly, based on survey responses, estimates of participation in the subsistence halibut fishery in Sand Point in 2009 and estimated harvests were down substantially from 2005–2008. During 2009, an estimated 70 Sand Point residents participated in the subsistence halibut fishery, compared to 130 in 2008. In 2009, 28 Sand Point fishers used setlines, compared to 71 in 2008, and 58 used hand-operated gear, compared to 58 in 2008. The estimated subsistence halibut harvest in 2009 was 11,759 lb,

approximately half the average annual harvest from 2005–2008; setline gear accounted for 3,987 lb (34%) and hand-operated gear provided 7,772 lb (66%) in 2009. An estimated 19 Sand Point SHARC holders also went sport fishing for halibut in 2009 and they harvested an estimated 2,665 lb. In total, the noncommercial halibut harvest estimate at Sand Point in 2009 was 14,424 lb, with 70 people involved in this harvest; this harvest was 55% of the annual average of the previous 4 years (Table 11).

The survey findings for Sand Point for 2010 illustrated the pattern first noted for 2009 of declining estimates of harvests and participation in the subsistence halibut fishery that may be the result of lowered rates of participation in the SHARC program. In 2010, the number of active SHARCs in Sand Point dropped to 130, the lowest since 2003. An estimated 61 SHARC holders participated in the subsistence fishery, 22 with setlines and 50 with hand-operated gear, again the lowest numbers since 2003. The estimated subsistence harvest of 7,306 lb (3,408 [47%] with setlines, and 3,898 [53%] with hand-operated gear) was the lowest estimate since 2003, and less than a third of the peak harvest estimates of 2005–2008. Sport harvests of 1,129 lb by 18 SHARC holders produced a total noncommercial halibut harvest for Sand Point of 8,435 lb, again lower than any year but 2003. Outreach in Sand Point is likely necessary to determine if subsistence halibut harvests have declined or whether the recent lower estimates are solely the result of decreased participation in the SHARC program.

Unalaska–Dutch Harbor (Regulatory Area 4A)

The city of Unalaska (which includes Dutch Harbor) had a population of 4,283 in 2000, including 397 Alaska Natives (U. S. Census Bureau 2001). The population in 2010 was 4,376 with 355 Alaska Natives (Table 1; ADLWD 2011). The Division of Subsistence conducted a household harvest survey in Unalaska–Dutch Harbor for the 1994 data year and estimated that the total halibut harvest was 97,601 lb (net weight) (3,049 fish) (±34%), excluding 10,606 lb (331 fish) removed from commercial catches for home use. Of the 700 households in the community, an estimated 391 (56%) had at least one member who fished for halibut in 1994. Most of the noncommercial harvest, 88,142 lb (90%), was taken with rod and reel (CSIS).

By the close of 2003, only 92 residents of Unalaska and Dutch Harbor had obtained SHARCs (Table 11). Notably, only 14 members of the Qawalangin Tribe of Unalaska obtained SHARCs in 2003. For the community overall as well as for the tribe, this was far fewer registrants than might have been predicted from the 1994 survey results. By the end of 2004, 131 Unalaska–Dutch Harbor residents had obtained SHARCs, as had 25 Qawalangin Tribe members. In 2005, 150 community members held SHARCs, as did 31 Qawalangin Tribe members. While a notable increase over 2003, this total continued to be lower than expected. The total increased to 171 SHARC holders in 2006, including 43 Qawalangin Tribe members. During 2007, 176 Unalaska–Dutch Harbor residents held SHARCs, including 46 Qawalangin Tribe members. In 2008, 173 Unalaska–Dutch Harbor residents held SHARCs, as did 43 Qawalangin Tribe members. In 2009, 164 community residents held SHARCs, as did 37 Qawalangin Tribe members. In 2010, the Unalaska–Dutch Harbor total was 155 SHARC holders; Qawalangin tribal members held 36 SHARCs in 2010.

In 2010, an estimated 92 Unalaska–Dutch Harbor SHARC holders participated in the subsistence halibut fishery, an estimated 54 sport fished, and an estimated 103 participated in either fishery. In comparison, in 2009, an estimated 76 Unalaska–Dutch Harbor SHARC holders participated in the subsistence halibut fishery, an estimated 45 sport fished, and an estimated 98 participated in either fishery. In 2008, an estimated 87 Unalaska–Dutch Harbor SHARC holders participated in the subsistence halibut fishery, an estimated 43 sport fished, and an estimated 101 participated in either fishery. In 2007, 83 Unalaska–Dutch Harbor SHARC holders participated in the subsistence halibut fishery, 33 sport fished, and 92 participated in either fishery. In 2006, 81 Unalaska–Dutch Harbor SHARC holders participated in the subsistence halibut fishery, 50 sport fished, and 101 participated in either fishery. In 2005, 88 SHARC holders participated in the subsistence halibut fishery and 28 sport fished; 97 participated in either fishery. In 2004, 81 SHARC holders subsistence fished for halibut and 34 sport fished; 93 participated in either

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fishery. In 2003, 50 Unalaska–Dutch Harbor SHARC holders subsistence fished for halibut, 33 sport fished, and 70 fished in either fishery (Table 11).

In 2010, SHARC holders in Unalaska–Dutch Harbor harvested an estimated 13,081 lb of halibut in the subsistence fishery. Of this, 7,417 lb was harvested with set lines (57%) and 5,663 lb (43%) with hand-operated gear. Additionally, they harvested 2,730 lb of halibut in the sport fishery, for a total noncommercial harvest of 15,811 lb (Table 11). The 2010 harvest was down substantially (49%) from 2009, when SHARC holders in Unalaska–Dutch Harbor harvested an estimated 29,306 lb of halibut in the subsistence fishery (19,204 lb with setlines [66%] and 10,102 lb with hand-operated gear [34%]). In 2009, there was an additional 1,861 lb of halibut harvested in the sport fishery, for a total noncommercial harvest of 31,167 lb (Table 11). The 2009 estimated halibut harvests by Unalaska–Dutch Harbor SHARC holders increased substantially from the first 6 years of the project, while the 2010 estimate was lower than all but one prior year. For example, in 2008, SHARC holders in Unalaska–Dutch Harbor harvested an estimated 13,710 lb of halibut in the subsistence fishery. Of this, 7,293 lb was harvested with setlines (53%) and 6,417 lb with hand-operated gear (47%). Additionally, they harvested 2,962 lb of halibut in the sport fishery, for a total noncommercial harvest of 16,672 lb. In 2007, the estimated subsistence halibut harvest was 13,250 lb, 9,012 lb (68%) with setline gear and 4,238 lb (32%) with hand-operated gear. The estimated sport harvest was 2,287 lb, for a total noncommercial harvest of 15,537 lb. In 2006, the estimated subsistence halibut harvest was 16,331 lb, 7,526 lb (46%) with setline gear and 8,805 lb (54%) with hand-operated gear. The estimated sport harvest was 3,768 lb for a total noncommercial harvest of 20,100 lb. In 2005, the estimated subsistence harvest was 18,108 lb (net weight), with most (9,573 lb; 53%) taken with setline gear and the balance with hand-operated gear. In addition, in 2005 Unalaska–Dutch Harbor SHARC holders harvested 2,439 lb of halibut while sport fishing, for a total noncommercial halibut harvest of 20,547 lb. In 2004, the estimated subsistence harvest was 15,530 lb (net weight), with most (9,557 lb; 62%) taken with setline gear and the balance with hand-operated gear. In addition, Unalaska–Dutch Harbor SHARC holders harvested 2,165 lb of halibut while sport fishing in 2004, for a total noncommercial halibut harvest of 17,695 lb. The estimated subsistence harvest for 2003 was 10,860 lb (net weight), and there was an additional 5,519 lb of halibut harvested while sport fishing, for a total noncommercial harvest of 16,379 lb.

The 2009 noncommercial halibut harvest by Unalaska–Dutch Harbor SHARC holders, by far the highest for the 8 study years, represents just 32% of the harvest estimate for 1994. Similarly, the 2010 estimate was 16%, the 2008 total halibut harvest was 17%, the 2007 total halibut harvest was 16%, the 2006 total halibut harvest was 21%, the 2005 total halibut harvest was 21%, the 2004 total halibut harvest was 18%, and the 2003 estimate was 17% of the 1994 estimate. There are at least 5 explanations for these differences. First, actual noncommercial halibut harvests in Unalaska may have declined since 1994, although a decline of this magnitude is probably unlikely. Second, if many fishers did not obtain a SHARC, the SHARC survey may have underestimated the subsistence halibut harvest. A third explanation is that the 1994 survey may have overestimated the halibut harvest. A fourth explanation is that many halibut fishers in Unalaska may prefer to harvest halibut under sport fishing regulations and therefore do not obtain SHARCs. A fifth possibility that may account for a decline in subsistence halibut harvests is a decline in stock abundance. The IPHC has noted a decline in abundance in Area 4A since 1994 (Gregg Williams, IPHC, personal communication, 2005). A combination of all 5 factors could be responsible for the unexpectedly low subsistence halibut harvest estimated for Unalaska from the SHARC surveys in all 8 study years. Further outreach in Unalaska is clearly appropriate, as well as additional research to better understand patterns of halibut fishing in the community.

Toksook Bay (Regulatory Area 4E)

Toksook Bay had a population of 532 in 2000 and 590 in 2010 (Table 1; U. S. Census Bureau 2001; ADLWD 2011). As discussed in Chapter 1, the number of valid SHARCs held by Toksook Bay residents dropped from 533 (approximating the community's total population) in 2007 to 34 in 2008, 33 in 2009, and 32 in 2010. Very few SHARCs that had been obtained in 2003 and that expired at the close of 2007

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were renewed. The Division of Subsistence has not conducted a household harvest survey in this community. Wolfe (2002) estimated a subsistence halibut harvest of 12,600 lb (net weight, 16,800 lb round weight) for this community for 2000, based upon a 1986 per capita estimate for the neighboring community of Tununak. During SHARC project years from 2003–2007, Division of Subsistence staff, with the assistance of the Toksook Bay tribal government, evaluated the list of SHARC holders in the community, estimated the total number of subsistence halibut fishers, and conducted interviews with likely fishers. Based on the results of this collaboration with the tribal government, it is highly likely that most community residents who subsistence fished for halibut in 2003–2007 provided harvest data through the SHARC survey. Therefore, harvest estimates for Toksook Bay for 2003–2007 represent the harvests reported by respondents to the survey, and are not expanded to the total number of SHARC holders in the community. In 2008 - 2010, however, no outreach or interviewing occurred in Toksook Bay. Of 34 SHARC holders in 2008, 11 (32%) responded to the mailed survey, as did 13 (39%) of 33 in 2009 and 12 (38%) of 32 in 2010. Unlike 2003–2007, returned survey data were expanded to estimate 2008, 2009, and 2010 halibut harvests in Toksook Bay.

The estimated harvest for Toksook Bay for 2003 was 24,500 lb (net weight) by 54 fishers (Table 11). Project staff consider this a reliable subsistence harvest estimate for the community. It should be noted that Toksook Bay is a member of the Coastal Villages Regional Fund (CVRF) CDQ organization[23]. The majority of the 5,034 lb of U32 (under 32 inches in length) halibut retained for home use by members of this CDQ organization in 2003 was landed at Toksook Bay and Mekoryuk (Williams 2004:59–60).

For 2004, 56 Toksook Bay SHARC holders reported a harvest of 6,596 lb of halibut, with most of this (5,737 lb) harvested with hand-operated gear (Table 11). This suggests a substantial decline in subsistence halibut harvests compared to 2003. As in 2003, a majority (69% of 7,120 lb [net weight]) of the U32 halibut retained for home use by the CVRF was landed at Toksook Bay and Mekoryuk (Williams 2005), but this cannot account for the decline in subsistence harvests.

In 2005, subsistence harvests by Toksook Bay SHARC holders rebounded to 14,870 lb; adding the 98 lb of SHARC holder's sport caught halibut produces a community total of 14,968 lb (Table 11). Almost all (14,269 lb; 96%) of the subsistence harvest was taken with hand-operated gear. Sixty-one Toksook Bay residents participated in the SHARC subsistence halibut fishery in 2005.

The estimated subsistence halibut harvest by Toksook Bay SHARC holders increased substantially in 2006, to 36,481 lb, all harvested with subsistence gear and most (34,149 lb; 94%) caught with hand-operated gear (Table 11). In 2006, the estimated number of participants in the SHARC subsistence fishery also increased, to 113 SHARC holders; the previous highest estimate was 61 subsistence halibut fishers in 2005. During interviews in the community in April 2007, SHARC fishers in Toksook Bay reported that subsistence fishing had been very productive in 2006; halibut were abundant and there was a corresponding increase in subsistence fishing effort. This may account for the large increase in the estimated harvest in 2006. Also, in 2006, over 67% of the 19,710 lb of U32 halibut retained for home use in the CVRF CDQ fishery were landed at Toksook Bay and Mekoryuk (Williams 2007). Division staff conducting interviews with SHARC holders in Toksook Bay reminded respondents to exclude CDQ U32 halibut in their subsistence estimates for the SHARC survey.

In 2007, the estimated subsistence harvest in Toksook Bay dropped to 7,921 lb (from 36,481 lb in 2006), with most of this harvest (6,469 lb; 82%) taken with hand-operated gear. The estimated number of participants in the subsistence fishery was 112, with most of these (100; 89%) using hand-operated gear. Also in 2007, 59% of the 11,398 lb of U32 halibut retained from home use during the Coastal Villages Regional Fund CDQ fishery were landed at Toksook Bay and Mekoryuk (Williams 2008). When conducting interviews in Toksook Bay in early 2008 about 2007 subsistence halibut harvests, Division of

[23] See footnote 8 for more information about the CDQ program.

Subsistence staff encountered several subsistence fishers who did not hold SHARCs. Therefore, the 2007 estimate based on the SHARC list likely underestimates the community's total by an unknown amount.

As noted above, the number of valid SHARCs for Toksook Bay dropped to 34 in 2008. Based on the SHARC survey returns (11 of 34; 32%), it is likely that many active halibut fishers in the community did not renew their SHARCs and therefore were not part of the SHARC survey, resulting in underestimates of participation in the fishery and in estimated harvests. For example, based on the survey results, 9 Toksook Bay residents participated in the subsistence halibut fishery in 2008, compared to an average of 73 for the previous 5 years (range 44 to 112; Table 11). The estimated harvest was 2,143 lb in 2008, while the previous 5-year average was 18,074 lb (range 6,596 to 36,481 lb).

Results for 2009 were similar to those of 2008. Only 33 SHARCs were active in Toksook Bay, again suggesting that many subsistence fishers are not participating in the program. Based on returned surveys (13 of 33; 39%), the estimated subsistence halibut harvest was 1,055 lb, with 789 lb (75%) taken with hand-operated gear. This harvest was less than one-half of that of 2008 and just 6% of the annual average from 2003–2007. The estimated number of subsistence halibut fishers in Toksook Bay in 2009 was 10, compared to 112 in 2007 and an average of 79 from 2003–2007.

Results for 2010 continued trends observed for 2008 and 2009. Only 32 SHARCs were active in Toksook Bay, again suggesting that many subsistence fishers are not participating in the program. Based on returned surveys (12 of 32; 38%), the estimated subsistence halibut harvest was 875 lb, with 560 lb (64%) taken with hand-operated gear. This harvest was less than one-half of that of 2008 and just 5% of the annual average from 2003–2007. The estimated number of subsistence halibut fishers in Toksook Bay in 2010 was 10, compared to 112 in 2007 and an average of 79 from 2003–2007. In 2010, Toksook Bay obtained 35% of the U32 halibut retained by the Coastal Villages Regional Fund CDQ catch, about 1,373 lb (Williams 2010:64).

Without renewed registrations in the SHARC program and outreach in the community, it is unlikely that the mail survey alone will provide reliable harvest estimates for the subsistence halibut fishery in Toksook Bay in the future.

Tununak (Regulatory Area 4E)

Tununak had a population of 325 in 2000, 315 of whom were Alaska Native (U. S. Census Bureau 2001). The population for 2010 was 327, with 314 Alaska Natives (Table 1; ADLWD 2011). The Division of Subsistence conducted a comprehensive household harvest survey in Tununak in 1986, which provides the only estimate of subsistence halibut harvests for the community prior to the adoption of the 2003 subsistence regulations. The harvest estimate for 1986 was 1,532 fish and 30,643 lb (net [dressed] weight), with a 95% confidence limit of ±26%. The harvest per capita was 93 lb (net weight) (CSIS).

No residents of Tununak obtained SHARCs in 2003,[24] and the Traditional Elders' Council in Tununak did not approve Division of Subsistence plans to conduct interviews with potential subsistence halibut fishers for 2003. Therefore, there is no subsistence halibut harvest estimate for this community for 2003. By the close of 2004, however, 70 residents of Tununak had obtained SHARCs (Table 11). Because only 9 SHARC holders responded to the postal survey (13%), harvest estimates for Tununak for 2004 are based on a very low sample achievement. The estimated total subsistence halibut harvest was 1,954 lb (net weight) by 31 fishers, 878 lb harvested with setline gear and 1,076 lb with hand-operated gear. No Tununak SHARC holders reported sport fishing activity.

The tribal government supported Division of Subsistence interviewing of subsistence halibut fishers in Tununak for the 2005 project year (Fall et al. 2006:5). Thirty-three of 70 SHARC holders were interviewed (47%). As in Toksook Bay, reported harvests were not expanded for Tununak for the 2005

[24] One tribal member obtained a SHARC, but this person was not a resident of Tununak.

project year because most known halibut fishers were interviewed. The total subsistence harvest of halibut was 2,661 lb by 20 fishers. Most of the harvest (88%) was taken with hand-operated gear. There were no sport harvests of halibut reported in Tununak in 2005.

In 2006, 70 Tununak residents held SHARCs. No interviewing took place in the community, but division staff did attempt to contact SHARC holders by telephone. Sample achievement was low (10 of 70 SHARC holders; 14%). Based on this limited sample, the estimated subsistence halibut harvest at Tununak in 2006 was 4,032 lb by 33 subsistence fishers. Almost all of this harvest (3,808 lb; 94%) was with hand-operated gear.

In 2007, 69 Tununak residents held SHARCs for a part of the year. With the support of a short-term contract with the division, staff of the Tununak IRA council conducted interviews in their community in order to supplement SHARC survey data. The estimated subsistence harvest in Tununak in 2007 was 7,015 lb by 38 fishers. Most of this harvest (5,479 lb; 78%) was taken with hand-operated gear.

In 2008, 68 Tununak residents held SHARCs. No outreach or supplemental interviewing took place in the community in 2008. The response rate to the mailed survey was 10% (7 of 68 SHARC holders). Estimated harvested based on this sample were by far the lowest of any project year for which data are available: 2,143 lb, all with hand-operated gear by an estimated 8 fishers. This is almost certainly a large underestimation of the subsistence harvest of halibut in Tununak in 2008.

Few of the SHARCs active in 2008 in Tununak were renewed and only 11 were active in 2009; 6 (55%) responded to the survey. An estimated 7 subsistence fishers harvested 488 lb of halibut in 2009, all with hand-operated gear. Due to the very limited participation in the SHARC program and based on results from 2004–2007, it is highly likely that a reliable estimate of subsistence halibut harvests in Tununak was not obtained for 2009.

As in 2009, only 11 SHARCs were active in Tununak in 2010; 3 (27%) responded to the survey. An estimated 9 subsistence fishers harvested 576 lb of halibut in 2010, all with hand-operated gear. Due to the very limited participation in the SHARC program and based on results from 2004–2007, it is highly likely that, as for 2009, a reliable estimate of subsistence halibut harvests in Tununak was not obtained for 2010.

Also, compared to the results of the 1986 survey, the harvest estimates for Tununak for 2004 through 2007 appear low. The reasons for this difference are uncertain. As just noted, the low response to the mailed SHARC survey plus a lack of outreach or follow-up interviews likely resulted in a large underestimation of the 2008, 2009, and 2010 harvests. Several additional years of harvest data collection plus renewed outreach and community support will be necessary to adequately document subsistence halibut harvest trends in this community.

COMPARISONS WITH NONSUBSISTENCE HARVESTS IN 2010

As reported in Table 18, the preliminary estimated total halibut removal in Alaskan waters in 2010 was 63,773,077 lb (net weight) based on data compiled by the IPHC (IPHC and Geiger 2011) and this project. In this total, the removal of 9,517 lb of U32 (under 32 inches in length) halibut for personal use by CDQ organizations in Areas 4D and 4E has been added to the subsistence harvest category. Commercial harvests accounted for 66.8% of halibut removals in Alaska in 2010 (Figure 33). Bycatch mortality of halibut in various other commercial fisheries ranked second, with 15.4% of the statewide removals. Sport harvests ranked third, with 12.1%. Wastage in the commercial halibut fishery added 4.5% to the total halibut removals. Finally, the subsistence fishery accounted for 1.3% of the total removals of halibut in Alaska waters in 2010.

Halibut harvests by fishery in 2010 at the regulatory area level did not differ substantially from the statewide pattern (Table 18, Figure 34). In all regulatory areas, commercial harvests accounted for 56% or more of the total pounds net weight of halibut removals. In Area 2C (Southeast Alaska) and Area 3A

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(Southcentral Alaska), sport fisheries took 31.6% and 16.9%, respectively, of the halibut harvest in 2010; however, sport fisheries were just 0.3% of the total harvest in Area 3B (compared to 0.2% for the subsistence harvest) and about the same as subsistence harvests in Area 4. Commercial bycatch accounted for 41.6% of halibut removals in Area 4. As a percentage of the total removal, subsistence halibut harvests were largest in Area 2C at 5.3% of the total (although they were less than 17% of the sport harvest and about 9% of the commercial harvest) and in Area 3A at 1.0%.

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CHAPTER 4: CONCLUSIONS AND RECOMMENDATIONS

SUMMARY AND CONCLUSIONS

New federal regulations governing subsistence halibut fishing in Alaska went into effect in May 2003. The 2010 calendar year was the eighth for which a program was implemented to estimate the subsistence harvest of halibut under these regulations. By several measures, the program is a success. Of 10,953 SHARC holders, 6,670 (61%) voluntarily provided information about their subsistence halibut fishing activities in 2010 by responding to the survey. This compares to a response rate of 59% (6,944 respondents of 11,733 SHARC holders) for the 2009 project year; 63% (7,316 respondents of 11,565 SHARC holders) for the 2008 project year; 58% (8,682 respondents of 15,047 SHARC holders) for the 2007 project year; 59% (8,426 respondents of 14,206 SHARC holders) for the 2006 project year; 60% for the 2005 project year (8,565 respondents of 14,306 SHARC holders); 62% for the 2004 project year (8,524 respondents of 13,813 SHARC holders); and 65% for the 2003 project year (7,593 respondents of 11,625 SHARC holders). In 2010, the number of valid SHARCs (10,953) was lower than 2009 (11,733) and 2008 (11,565), and 17% lower than the 7-year average from 2003–2009 (Table 19). Nonrenewed SHARCs probably account for most of this decline. The largest portion of this decline in the number of SHARC holders was in the tribal segment: 3,906 SHARCs in 2010 compared to 7,446 in 2007, a decline of 48%. Tribal SHARCs are valid for 4 years, so those issued in 2003, the first year of the new fishery, expired in 2007. In comparison, the number of nontribal SHARC holders dropped 5% from 2007 (7,601 SHARCs) to 2008 (7,249 SHARCs), increased to 7,724 in 2009, and decreased to 7,047 in 2010. Nontribal SHARCs are valid for 2 years, so there have been several rounds of expirations and renewals since 2003, in contrast to the tribal SHARC group. The next section of the report discusses an analysis of SHARC expiration and renewal patterns and identifies some implications of these patterns for future harvest estimates.

Based on the survey returns, an estimated 4,991 individuals participated in the Alaska subsistence halibut fishery in 2010. This is a decrease of 6% from the estimated 5,296 SHARC holders who subsistence fished for halibut in Alaska in 2009, and is 10% lower than the 7-year average from 2003–2009. The estimated subsistence harvest of halibut in Alaska in 2010 is 43,332 fish and 797,560 lb (±3%). In comparison, the 2009 estimated subsistence halibut harvest was 45,434 fish and 861,359 lb (±4%); the 2008 estimated subsistence halibut harvest was 48,604 fish and 886,988 lb (net weight) (±3.0%); the 2007 estimated subsistence halibut harvest was 53,697 fish and 1,032,293 lb (±4.1%); the 2006 estimated subsistence halibut harvest was 54,089 fish and 1,125,312 lb (±2.9%); the 2005 estimated subsistence halibut harvest was 55,875 fish and 1,178,222 lb (net weight) (±3.0%); the 2004 estimated subsistence harvest was 52,412 halibut and 1,193,162 net pounds (±1.5%), and 43,926 halibut for 1,041,330 lb (±4%) were harvested in the subsistence fishery in 2003. As measured in pounds, the 2010 subsistence halibut harvest was about 7% lower than the harvest in 2009 and 24% lower than the 7-year average from 2003–2009 (Table 18). The total estimated harvests for 2003–2010 are below the 1.5 million net pounds estimated for the Alaska subsistence halibut harvest when the current regulations were developed by the North Pacific Fishery Management Council (see http://www.fakr.noaa.gov/frules/70fr16742.pdf, page 16748; NPFMC 2003). The larger estimated harvest in 2004 compared to 2003 most likely corresponded to the greater number of individuals who held SHARCs through December 2004 and a proportional increase in the number of individuals who subsistence fished for halibut. The leveling off and slight decline in the harvests in 2006 and 2005, compared to 2004, are consistent with the leveling-off of the number of individuals who held SHARCs for at least a portion of these years. However, harvests as estimated in pounds dropped in 2007 despite an increase in individuals who held a SHARC for at least part of the year. In 2008, estimated harvests dropped by 14% and the number of SHARC holders dropped by 23%; in 2009, the number of SHARC holders rose slightly (1.5%) while the harvest dropped by 0.1%; in 2020 both the number of SHARC holders and the harvest dropped by about 7% compared to the previous year. Average harvests per fisher were about the same in 2010 (8.7 halibut per fisher for 160 lb) as 2009 (8.6 halibut per fisher for 163 lb), but down compared to 2008 (9.2 halibut per fisher for 167 lb),

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2007 (9.1 halibut per fisher for 174 lb), and 2006 (9.2 halibut per fisher for 190 lb). Of the 7 previous project years, average harvests were highest in 2005 (9.9 halibut per fisher for 210 lb). In the first 2 years of the project, averages were 8.8 halibut per fisher for 199 lb in 2004 and 8.9 halibut per fisher for 211 lb in 2003. Of the 8 project years, the average weight of subsistence halibut declined from 23.7 lb in 2003 to 18.2 lb in 2008 (a decline of 23%), rose slightly to 19.0 lb in 2009, and dropped slightly to 18.4 lb per fish in 2010 (Table 19). The average weight of a subsistence-caught halibut dropped 11% from 2003 to 2010.

After 8 years of the harvest assessment program, it appears likely that the overall larger statewide harvest estimates in 2004, 2005, and 2006 compared to 2003 were, at least in part, a consequence of increased participation of subsistence fishers in the SHARC program after 2003 and, perhaps, an increase in trust on the part of subsistence fishers in the survey. The lower harvest estimates for 2008, 2009, and 2010 may in part be a consequence of reduced participation in the SHARC program, especially among eligible tribal members. As the community case studies demonstrate, however, a number of factors appear to have caused the differences in harvest estimates over the 8 project years, and these differ by community. Some were methodological (St. Paul, for example), while other factors were probably linked to more thorough and accurate documentation of harvests (Cordova and Sand Point, for example) rather than a true increase. On the other hand, decreases in subsistence halibut harvests in Area 2C appear to reflect declining success in harvests, with declines in Sitka (down 53% from 2003 to 2010) particularly notable.

In 2010, most subsistence halibut were harvested with setline (stationary) gear (77%) and the rest with hand-operated gear (23%). Similarly, in 2009, most subsistence halibut were harvested with setline gear (72%) and the rest with hand-operated gear (28%); in 2008, 74% of the subsistence halibut were taken with setline gear; in 2007, 69% of the subsistence halibut were taken with setline gear; in 2006, 70% of the subsistence halibut were taken with setline gear; in 2005, 70% of the subsistence halibut were harvested with setline gear; in 2004, 74% of the subsistence halibut were harvested with setline gear; and in 2003, setlines accounted for 72% of the harvest.

The largest portion of the Alaska subsistence halibut harvest in 2010 occurred in Regulatory Area 2C (Southeast Alaska), at 53% (424,818 lb), followed by Area 3A (Southcentral Alaska) at 39% (312,650 lb), Area 3B (Alaska Peninsula) at 3% (23,009 lb), Area 4A (Eastern Aleutian Islands) at 2% (14,548 lb), Area 4C (Pribilof Islands) 1% (10,859 lb), Area 4E (East Bering Sea Coast) at 1% (10,055 lb), Area 4D (Central Bering Sea) at less than 1% (1,171 lb), and Area 4B (Western Aleutian Islands) at less than 1% (450 lb). In 2003–2009, Area 2C (Southeast Alaska) and Area 3A (Southcentral Alaska) also accounted for most of the subsistence harvests. The proportion of the statewide subsistence halibut harvest occurring in Area 2C (Southeast Alaska) has declined from 60% in 2003 and 57% in 2004 to 51% in 2005, 52% in 2006, 51% in 2007, 52% in 2008, 53% in 2009, and 53% in 2010. Correspondingly, the portion occurring in Area 3A (Southcentral Alaska) increased from 27% in 2003 to 34% in 2004, 36% in 2005, 34% in 2006, 36% in 2007, 38% in 2008, 38% in 2009, and 39% in 2010. Subsistence harvests accounted for 1.3% of the total halibut removals in Alaska waters in 2010, compared to 1.2% in 2009, 1.3% in 2008, 1.4% in 2007, 1.5% in 2006, 1.5% in 2005, 1.5 % in 2004, and 1.3% in 2003.

Subsistence halibut fishers had an estimated incidental harvest of 12,851 rockfish in 2010. This is a decrease of 4% from the estimate of 13,315 rockfish for 2009 and a decrease of 15% from the 7-year average from 2003–2009 (Table 19). There were 1,322 SHARC holders who harvested rockfish while subsistence halibut fishing in 2010, compared to 1,427 in 2009, 1,404 in 2008, 1,568 in 2007, 1,529 in 2006, 1,544 in 2005, 1,616 in 2004, and 1,239 in 2003. Most of the incidental rockfish harvests in 2010 occurred in Area 2C (60%), as they had in 2009 (67%), 2008 (70%), 2007 (68%), 2006 (68%), 2005 (63%), 2004 (68%), and 2003 (67%).

In 2010, subsistence halibut fishers harvested an estimated 2,864 lingcod in the subsistence halibut fishery. This is a decrease of 16% from the estimate of 3,390 lingcod harvested in the subsistence halibut fishery in 2009, and a decrease of 16% from the 7-year average from 2003–2009. In total, 732 SHARC holders harvested lingcod while subsistence halibut fishing in 2010. This is 19% lower than the 900

SHARC holders who had an incidental harvest of lingcod in 2009, and 17% lower than the 7-year average from 2003–2009 (Table 19). As with rockfish, most of the incidental lingcod harvests took place in Area 2C in 2010 (63%), 2009 (60%), 2008 (71%), 2007 (66%), 2006 (59%), 2005 (56%), 2004 (56%) and 2003 (51%).

As discussed above, although comparisons of the 2003–2010 harvest estimates with those from previous research by the Division of Subsistence are complicated by different research methods, such comparisons may still be instructive. Subsistence harvest estimates for most of the larger communities (combining tribal and rural SHARC holders) such as Sitka, Petersburg, and Kodiak for 2003–2010 are within the range of earlier estimates based on household surveys. This is significant in that these communities account for a very large percentage of the total harvest. We conclude that the 8 years of the survey of SHARC holders produced sound estimates of subsistence harvests of halibut in Alaska based on a scientific sample and a relatively high response rate. The estimates can be further evaluated as additional years of harvest data are collected. Continued documentation of the subsistence harvests is also necessary for any meaningful discussion of long-term trends in the fishery.

SHARC EXPIRATION AND RENEWAL PATTERNS, 2003–2009[25]

Since the current federal subsistence halibut regulations came into effect in 2003 through 2009, 19,603 individuals had obtained SHARCs. SHARCs must be renewed periodically: rural SHARCs every 2 years and tribal SHARCs every 4 years. Continuing participation in the SHARC program by subsistence halibut fishers is essential for achieving reliable harvest estimates.

Of the 19,603 SHARC holders, 7,870 (40.1%) did not renew their SHARCs, including 49.7% of tribal SHARC holders and 33.6% of rural SHARC holders. The remaining 11,733 SHARCs were active in 2009 (59.9% of all SHARCs issued), either being renewed one or more times or not yet being subject to renewal. This includes 4,009 tribal SHARCs (50.3% of all Tribal SHARCs that have been issued) and 7,724 rural SHARCs (66.4%) (Figure 35).

SHARC holders who did not renew their SHARCs were more likely than currently (in 2009) active SHARC holders to have never responded to the harvest survey or to never have participated in the subsistence halibut fishery (Table 20, Figure 36). Of all SHARC holders, 27% of nonrenewals had never responded to the survey, compared to 15% of currently active SHARC holders. Additionally, 33% of expired SHARCs had not been fished; 13% of active SHARC holders have not fished. This pattern exists within each SHARC type as well. Of tribal SHARC holders, 29% who did not renew their SHARC never responded to the survey, compared to 19% of currently active tribal SHARC holders. Also, 41% of expired tribal SHARCs never were fished, compared to 21% of active tribal SHARCs. Of all rural SHARC holders whose SHARCs expired, 25% never responded to the survey and 25% did not fish. Of active rural SHARCs, 12% have not responded to the survey and 8% have never fished.

This finding suggests that over time, the set of active SHARC holders has become more likely to include individuals who will respond to the survey and participate in the subsistence halibut fishery. The trend is more pronounced for tribal SHARC holders, most likely because, as discussed above, this group initially included a large percentage young tribal members and elders who did not actively participate in the fishery.

However, 40% of expired SHARCs were held by individuals who had participated in the subsistence halibut fishery, including 30% of expired tribal SHARCs and 50% of expired rural SHARCs (Figure 36). Of all SHARC holders that reported some subsistence fishing activity, 27% did not renew their SHARC, including 33% of tribal SHARC holders who fished and 24% of rural SHARC holders who fished (Figure

[25] The following analysis is based on data available through the 2009 study year and has not been updated for this report. However, the patterns and trends described for 2003 – 2009 likely continued through the 2010 study year, thus we have retained this section in this current report.

35). The reasons why subsistence halibut fishers did not renew their SHARCs are unknown. If a substantial number of these individuals have continued to participate in the subsistence halibut fishery without renewing their SHARC, an underestimate of future subsistence halibut harvests may result.

There were 22 tribes with 13 or more individuals who obtained SHARCs from 2003 through 2009 that had SHARC renewal rates of less than 50%. In total, 2,590 members of these tribes obtained SHARCs, 33% of all tribal SHARC holders, and 1,933 of these SHARCs (75%) were not renewed, 49% of all nonrenewed tribal SHARCs. Of the 963 members of these tribes who held SHARCs and participated in the subsistence halibut fishery, 62% did not renew their SHARCs. Nonrenewal rates for subsistence fishers among this group of tribes ranged from 25% to 100%. This finding suggests a trend in at least some tribes of subsistence fishers dropping out of the SHARC program, which may result in an underestimate of the subsistence halibut harvest in the future.

In summary, this analysis of renewal patterns for SHARC holders from 2003 through 2009 suggests 2 trends that may have opposite effects on subsistence halibut harvest estimates. First, it appears that individuals who did not respond to the survey or did not participate in the fishery were less likely than those who fished to renew their SHARCs. Thus nonfishers may have been overrepresented in the first several years of the harvest survey, and been over-represented in the nonrespondent group. If so, harvests for the early years of the program may have been overestimated. Second, it appears that a notable portion of subsistence fishers have not renewed their SHARCs. If so, future estimates of subsistence halibut harvests will be too low, because they are based solely on responses to the survey that is mailed to SHARC holders.

RECOMMENDATIONS

We conclude this report with the following recommendations based on experiences during the 8 years of this project. These suggestions are similar to those that were offered at the conclusion of the earlier years' reports (Fall et al. 2004:30–31; Fall et al. 2005:34–36; Fall et al. 2006:37–38; Fall et al. 2007:39–40; Fall and Koster 2008:39–40; Fall and Koster 2010:35–36; Fall and Koster 2011:36-38).

1. The harvest assessment program for the Alaska subsistence halibut fishery should continue.[26] The 8-year effort just completed developed a time series for assessment of harvest trends in the future. As discussed above, the methods used for 2003–2010 (a short postal survey with at least one follow-up mailing, supplemented by community outreach, interviewing in selected communities, and partnerships with tribal governments), were successful and should be retained to facilitate comparisons across project years. It should be noted, however, that due to reduced funding and rising costs, in 2009 and 2010 only 2 survey mailings took place and supplemental surveys occurred only in a few Area 2C communities. Such reductions may result in lower response rates in the future. A recommendation in the final report for the third year of the program was that "implementation of a program to collect harvest data in season in selected communities should be considered on a trial basis to help supplement and evaluate the data collected through the postal survey" (Fall et al. 2006:37). The Division of Subsistence conducted an inseason harvest monitoring project for the subsistence halibut fishery in Sitka and Kodiak in 2006 with funding provided by NMFS. Findings were presented in Fall et al. (2009). Consideration should be given in the future to inseason monitoring programs in other communities as a method to compare harvest estimates with those from the mailed surveys.
2. As noted in Chapter 1, most likely due to expirations and nonrenewals, total valid SHARCs declined from 15,047 in 2007 to 11,565 in 2008, 11,733 in 2009, and 10,953 in 2010, with

[26] Through a new grant, award number NA11NMF4370059, the Division of Subsistence received funding in 2011 from NOAA to conduct a ninth year of surveys to document subsistence harvests that occurred in 2011. A modest increase in the budget will allow restoration of the 3rd round of survey mailings and enhanced outreach activities.

most of this decline occurring in the tribal segment of SHARC holders (7,446 in 2007, 4,316 in 2008, 4,009 in 2009, 3,906 in 2010). Such changes in the registration of potential subsistence halibut fishers has implications for future harvest estimates and are another reason why monitoring of the harvests should continue.

3. Additionally, analysis suggests that a significant number of subsistence halibut fishers may not have renewed their SHARCs. This finding suggests that additional outreach among eligible tribes and rural areas is necessary to maximize enrollment of fishers in the SHARC program.

4. Specifically, additional or renewed outreach is needed in several communities outside of Area 2C (the only area where outreach took place in the last 2 study years), including Unalaska–Dutch Harbor, Atka, Tununak, Toksook Bay, St. Paul, Sand Point, and Savoonga, based on relatively low response rates or unexpectedly low numbers of SHARCs issued, especially if more reliable harvest estimates are desired in areas 3B and 4, and given reduced funds to conduct the project. Contracts with tribal governments or local hiring in communities of Area 2C, such as Sitka, Angoon, Hydaburg, and Ketchikan, should be continued in future harvest monitoring efforts in those communities.

5. Given the drop in SHARC registrations, community outreach is also necessary in Area 4E (East Bering Sea Coast) if reliable harvest estimates are to be produced. There are many communities in this very large geographic area but, compared to areas 2C and 3A, relatively few SHARCs have been issued and a smaller percentage of the statewide subsistence halibut harvest occurs in Area 4E. Through the 2007 project year, the focus of outreach in Area 4E was on those communities that are known to have relatively large traditional harvests of halibut. Harvests in many other communities in this area are likely to be small. However, due to funding cuts, no outreach or supplemental surveys took place in any Area 4E community for 2009 or 2010. Although a major outreach effort that would include most of communities of 4E would be expensive and probably unnecessary, communications with tribal governments could result in more enrollments in the SHARC program and more confidence in the survey results.

6. If rockfish or lingcod incidental harvests in the halibut subsistence fishery continue to be of interest to managers in some areas, more specific data collection tools need to be developed to collect rockfish harvest data at the species level in particular communities. This should be done only in selected areas of concern given the additional costs to data collection and analysis that this will entail (see Wolfe 2002 for more discussion of collection of rockfish harvest data through the SHARC survey). Such research should occur only through partnerships with local communities and tribes, and should include a combination of participant observation, key respondent interviewing, and survey methods. A model is the study of subsistence harvests of rockfish in Nanwalek, Port Graham, Chenega Bay, and Sitka conducted by the Division of Subsistence with funding from the North Pacific Research Board (Turek et al. 2009).

7. Further evaluation of several years of sport fishing harvest data achieved through the postal *Statewide Harvest Survey* administered by the Division of Sport Fish should take place for the larger rural communities participating in the subsistence halibut fishery. (Analysis of these data for Sitka was conducted as a pilot effort for 2004. See Fall et al. 2005:22–24.) As discussed in Chapter 2 and Chapter 3, many SHARC holders also reported that they sport fished for halibut in 2003–2010. It will be important to try to determine if a shift in harvest from the "sport" category to the "subsistence" category is occurring, in order to evaluate trends in the subsistence fishery and the effect of the new subsistence halibut regulations on fishing patterns. Also, as noted in Chapter 3, comparisons of community harvest estimates

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from previous research require consideration of sport harvests as well as harvests under the new subsistence regulations. Such comparisons are also important for evaluating the subsistence harvest assessment program and the performance of the new subsistence regulations.

8. Consideration should be given to funding and implementing ethnographic investigations in key halibut fishing communities to evaluate the effects of the new subsistence fishing regulations on fishing patterns. These studies would entail more detailed interviewing of fishers regarding changes in gear choice, fishing effort, harvest amounts, incidental harvests of rockfish or lingcod, or other fishing activities that have resulted from the regulatory changes. These interviews could also investigate traditional knowledge about local halibut stocks (as well as local stocks of rockfish and lingcod) that might prove useful to management agencies, communities, and tribes for future management of the subsistence, sport, and commercial halibut fisheries in Alaska.

9. Results of the 8 years of survey data and the inseason project should be evaluated to design a sustainable harvest monitoring program for the Alaska subsistence halibut fishery consistent with available long-term funding. Such a program could be based on a postal survey linked with other data gathering methods in selected communities or regulatory areas, such as face-to-face interviews, calendars, or limited inseason monitoring. Outreach about the subsistence halibut regulations, including the requirement to obtain a SHARC, should be part of any continuing harvest monitoring program. Steps toward evaluating and enhancing the current program will be taken under the new grant (award number NA11NMF4370059) that supports project activities for the 2011harvest year. The award includes a modest budget increase to restore the third round of survey mailings and support enhanced outreach activities.

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TABLES AND FIGURES

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Table 1.–Population of rural communities eligible to participate in the Alaska subsistence halibut fishery, 2000 and 2010.

Community[a]	Regulatory area	Population: 2000		Population: 2010	
		Total	Alaska Native	Total	Alaska Native
Angoon	2C	572	419	459	405
Coffman Cove	2C	199	12	176	10
Craig	2C	1,397	432	1,201	378
Edna Bay	2C	49	2	42	0
Elfin Cove	2C	32	0	20	6
Gustavus	2C	429	32	442	30
Haines	2C	1,811	332	1,713	278
Hollis	2C	139	13	112	10
Hoonah	2C	860	597	760	502
Hydaburg	2C	382	342	376	324
Hyder	2C	97	4	87	5
Kake	2C	710	530	557	449
Kasaan	2C	39	19	49	22
Klawock	2C	854	496	755	446
Klukwan	2C	139	123	95	86
Metlakatla	2C	1,375	1,125	1,405	1,245
Meyers Chuck	2C	21	2		
Naukati Bay	2C	135	13	113	9
Pelican	2C	163	42	88	36
Petersburg	2C	3,224	388	2,948	390
Point baker	2C	35	3	15	2
Port Alexander	2C	81	11	52	3
Port Protection	2C	63	7	48	13
Saxman	2C	431	302	411	276
Sitka	2C	8,835	2,178	8,881	2,184
Skagway	2C	862	44	920	52
Tenakee Springs	2C	104	5	131	5
Thorne Bay	2C	552	27	471	23
Whale Pass	2C	58	2	31	1
Wrangell	2C	2,308	550	2,369	582
Census area balances[d]	2C			1,230	
Subtotal, Area 2C [5]		**25,956**	**8,052**	**25,957**	**7,772**
Akhiok	3A	80	75	71	62
Chenega Bay	3A	86	67	76	46
Cordova	3A	2,454	368	2,239	344
Karluk	3A	27	26	37	35
Kodiak[b]	3A	12,973	1,697	12,824	983
Larsen Bay	3A	115	91	87	66
Nanwalek	3A	177	165	254	227
Old Harbor	3A	237	203	218	194
Ouzinkie	3A	225	197	161	140
Port Graham	3A	171	151	177	160
Port Lions	3A	253	163	194	119
Seldovia	3A	286	66	420	121
Tatitlek	3A	107	91	88	58
Yakutat	3A	680	375	662	330
Census area balances[d]	3A				
Subtotal, Area 3A		**17,871**	**3,735**	**17,508**	**2,885**

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Table 1.–Page 2 of 3.

Community[a]	Regulatory area	Population: 2000 Total	Population: 2000 Alaska Native	Population: 2010 Total	Population: 2010 Alaska Native
Chignik	3B	79	48	91	56
Chignik Lagoon	3B	103	85	78	58
Chignik Lake	3B	145	127	73	70
Cold Bay	3B	88	15	108	20
False Pass	3B	64	42	35	27
Ivanof Bay	3B	22	21	7	7
King Cove	3B	792	379	938	384
Nelson Lagoon	3B	83	68	52	40
Perryville	3B	107	105	113	110
Sand Point	3B	952	421	976	417
Census area balances[d]				5	
Subtotal, Area 3B		**2,435**	**1,311**	**2,476**	**1,189**
Akutan	4A	713	117	1,027	76
Nikolski	4A	39	27	18	17
Unalaska	4A	4,283	397	4,376	355
Census area balances[d]				178	
Subtotal, Area 4A		**5,035**	**541**	**5,599**	**448**
Adak	4B	316	118	326	46
Atka	4B	92	84	61	58
Census area balances[d]					
Subtotal, Area 4B		**408**	**202**	**387**	**104**
St. George Island	4C	152	140	102	92
St. Paul Island	4C	532	460	479	417
Census area balances[d]					
Subtotal, Area 4C		**684**	**600**	**581**	**509**
Gambell	4D	649	622	681	654
Savoonga	4D	643	614	671	637
Diomede	4D	146	137	115	110
Census area balances[d]					
Subtotal, Area 4D		**1,438**	**1,373**	**1,467**	**1,401**
Alakanuk	4E	652	638	677	660
Aleknagik	4E	221	187	219	185
Brevig Mission	4E	276	254	388	366
Bethel	4E	5,471	3,719	6,080	4,334
Chefornak	4E	394	386	418	403
Chevak	4E	765	734	938	912
Clark's Point	4E	75	69	62	55
Council Anvsa[c]	4E	0	0	0	0
Dillingham	4E	2,466	1,503	2,329	1,549
Eek	4E	280	271	296	289
Egegik	4E	116	89	109	51
Elim	4E	313	297	330	305
Emmonak	4E	767	720	762	737
Golovin	4E	144	133	156	148
Goodnews Bay	4E	230	216	243	232
Hooper Bay	4E	1,014	971	1,093	1,070
King Salmon	4E	442	133	374	132
Kipnuk	4E	644	631	639	626
Kongiganak	4E	359	349	439	430
Kotlik	4E	591	568	577	563

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Table 1.–Page 3 of 3.

Community[a]	Regulatory area	Population: 2000 Total	Population: 2000 Alaska Native	Population: 2010 Total	Population: 2010 Alaska Native
Koyuk	4E	297	280	332	319
Kwigillingok	4E	338	331	321	310
Levelock	4E	122	116	69	62
Manokotak	4E	399	378	442	425
Mekoryuk	4E	210	203	191	185
Naknek	4E	678	319	544	283
Napakiak	4E	353	341	354	344
Napaskiak	4E	390	383	405	393
Newtok	4E	321	311	354	343
Nightmute	4E	208	197	280	266
Nome	4E	3,505	2,057	3,598	2,348
Nunam Iqua (formerly Sheldon Point)	4E	164	154	187	174
Oscarville	4E	61	61	70	67
Pilot Point	4E	100	86	68	57
Platinum	4E	41	38	61	57
Port Heiden	4E	119	93	102	87
Quinhagak	4E	555	540	669	650
Scammon Bay	4E	465	453	474	472
Saint Michael	4E	368	343	401	379
Shaktoolik	4E	230	218	251	242
Shishmaref	4E	562	531	563	540
Solomon Anvsa	4E	4	3	0	0
South Naknek	4E	137	115	79	66
Stebbins	4E	547	518	556	530
Teller	4E	268	248	229	220
Togiak	4E	809	750	817	767
Toksook Bay	4E	532	519	590	555
Tuntutuliak	4E	370	366	408	396
Tununak	4E	325	315	327	314
Twin Hills	4E	69	65	74	72
Ugashik	4E	11	9	12	9
Unalakleet	4E	747	655	688	574
Wales	4E	152	137	145	136
White Mountain	4E	203	175	190	167
Census area balances[d]				398	
Subtotal, Area 4E		**28,880**	**23,176**	**30,378**	**24,856**
Total		**82,707**	**38,990**	**84,353**	**39,164**

Source U.S. Census Bureau 2001, 2011; Alaska Department of Labor and Workforce Development 2011.

a. Alaska Native village statistical area populations were used whenever no city or census designated place (CDP) populations were present in the census.

b. Total population for Kodiak Island road system area; includes Kodiak City, Kodiak Station, Chiniak, and other areas on the road system.

c. There is no census table for a council CDP or municipality in 2000. The council ANVSA table indicated that all 40 housing units were vacant in 2000.

d. Population living outside incorporated places and census designated places but eligible for participation in the subsistence halibut fishery as of December 4, 2009.

e. Nontribal residents of Naukati Bay were not eligible for SHARCS until 2008. This community was not included in population estimates for previous study years.

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Table 2.–Project chronology, 2010 study year.

Date	Event/Action
October 1, 2010	Award No. NA04NMF4370170 between NMFS and ADF&G amended to support the research for study year 2010
January 26, 2011	Presentation of 2009 study findings at IPHC annual meeting, Victoria, BC
February 7, 2011	Distribution of final report and 4 page summary for study year 2009
March 16, 2011	First mailing of survey forms
May 16, 2011	Second mailing of survey forms
April through June 2011	Administration of surveys in Angoon, Hydaburg, Ketchikan, and Sitka
April 8, 2011	Submission of semi-annual report on project progress to NMFS
October 24, 2011	Submission of semi-annual report on project progress to NMFS
November 21, 2011	Release of public review draft of final report
December 7, 2011	Presentation of study findings, NPFMC, Anchorage
December 31, 2011	Completion of revised, final report

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Table 3.–Sample achievement.

Tribal name	Regulatory areas	First Mailing			Second Mailing			Third Mailing			Totals					
		Surveys mailed	Surveys returned	Surveys returned undeliverable	Surveys mailed	Surveys returned	Surveys returned undeliverable	Surveys Mailed	Surveys returned	Surveys returned undeliverable	SHARCs issued	Returned by mail	Returned through staff	Response	Response rate	Undeliverable
Angoon Community Association	2C	92	20	2	66	2	5	0	0	0	92	22	51	73	79.3%	7
Aukquan Traditional Council	2C	1														
Central Council Tlingit and Haida Indian Tribes	2C	488	158	31	316	46	9	0	0	0	488	204	11	215	44.1%	40
Chilkat Indian Village	2C	23	15	1	13	2	0	0	0	0	23	17	0	17	73.9%	1
Chilkoot Indian Association	2C	48	18	2	31	3	1	0	0	0	48	21	1	22	45.8%	2
Craig Community Association	2C	63	27	5	35	5	1	0	0	0	63	32	1	33	52.4%	6
Douglas Indian Association	2C	16	1	1	14	2	0	0	0	0	16	3	0	3	18.8%	1
Hoonah Indian Association	2C	141	52	11	83	15	2	0	0	0	141	67	1	68	48.2%	13
Hydaburg Cooperative Association	2C	124	27	9	89	0	0	0	0	0	124	27	81	108	87.1%	9
Ketchikan Indian Corporation	2C	503	140	27	350	16	9	0	0	0	503	156	163	319	63.4%	35
Klawock Cooperative Association	2C	80	24	4	54	7	1	0	0	0	80	31	0	31	38.8%	5
Metlakatla Indian Community, Annette Island Reserve	2C	172	49	9	120	24	1	0	0	0	172	73	3	76	44.2%	10

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Table 3.–Page 2 of 15.

Tribal name	Regulatory areas	First Mailing			Second Mailing			Third Mailing			Totals					
		Surveys mailed	Surveys returned	Surveys returned undeliverable	Surveys mailed	Surveys returned	Surveys returned undeliverable	Surveys Mailed	Surveys returned	Surveys returned undeliverable	SHARCs issued	Returned by mail	Returned through staff	Response	Response rate	Undeliverable
Organized Village of Kake	2C	80	41	0	43	13	1	0	0	0	80	54	0	54	67.5%	1
Organized Village of Kasaan	2C	8	3	3	2	1	0	0	0	0	8	4	0	4	50.0%	3
Organized Village of Saxman	2C	37	5	3	29	1	1	0	0	0	37	6	12	18	48.6%	3
Petersburg Indian Association	2C	73	33	4	40	6	0	0	0	0	73	39	1	40	54.8%	4
Sitka Tribe of Alaska	2C	289	105	22	168	22	3	0	0	0	289	127	25	152	52.6%	24
Skagway Village	2C	3														
Wrangell Cooperative Association	2C	94	58	6	37	3	1	0	0	0	94	61	1	62	66.0%	7
Subtotal, Area 2C		**2,335**	**779**	**140**	**1,491**	**168**	**35**	**0**	**0**	**0**	**2,335**	**947**	**351**	**1,298**	**55.59%**	**171**
Kenaitze Indian Tribe	3A	123	51	5	79	10	1	0	0	0	123	61	0	61	49.6%	6
Lesnoi Village (Woody Island)	3A	71	35	5	32	4	1	0	0	0	71	39	0	39	54.9%	6
Native Village of Afognak	3A	24	11	0	13	3	0	0	0	0	24	14	0	14	58.3%	0
Native Village of Akhiok	3A	9	1	2	6	1	0	0	0	0	9	2	0	2	22.2%	2
Native Village of Chenega	3A	17	8	0	10	0	0	0	0	0	17	8	0	8	47.1%	0
Native Village of Karluk	3A	4														

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Table 3.–Page 3 of 15.

Tribal name	Regulatory areas	First Mailing			Second Mailing			Third Mailing			Totals					
		Surveys mailed	Surveys returned	Surveys returned undeliverable	Surveys mailed	Surveys returned	Surveys returned undeliverable	Surveys Mailed	Surveys returned	Surveys returned undeliverable	SHARCs issued	Returned by mail	Returned through staff	Response	Response rate	Undeliverable
Native Village of Eyak	3A	80	32	3	48	9	1	0	0	0	80	41	0	41	51.3%	4
Native Village of Larsen Bay	3A	37	16	1	21	4	3	0	0	0	37	20	0	20	54.1%	3
Native Village of Nanwalek	3A	44	12	0	34	6	0	0	0	0	44	18	0	18	40.9%	0
Native Village of Ouzinkie	3A	37	12	0	25	5	0	0	0	0	37	17	0	17	45.9%	0
Native Village of Port Graham	3A	43	12	1	30	13	1	0	0	0	43	25	0	25	58.1%	2
Native Village of Port Lions	3A	32	19	0	14	3	0	0	0	0	32	22	0	22	68.8%	0
Native Village of Tatitlek	3A	23	9	2	12	2	0	0	0	0	23	11	0	11	47.8%	2
Ninilchik Village	3A	81	32	7	43	8	1	0	0	0	81	40	0	40	49.4%	7
Seldovia Village Tribe	3A	63	33	6	24	2	0	0	0	0	63	35	0	35	55.6%	6
Sun'aq Tribe of Kodiak (Formerly Shoonaq')	3A	126	40	11	81	8	1	0	0	0	126	48	0	48	38.1%	11
Village of Kanatak	3A	18	4	1	13	1	3	0	0	0	18	5	0	5	27.8%	4
Village of Old Harbor	3A	46	16	4	27	3	0	0	0	0	46	19	0	19	41.3%	4
Village of Salamatoff	3A	21	13	1	7	0	0	0	0	0	21	13	0	13	61.9%	1
Yakutat Tlingit Tribe	3A	41	14	2	29	7	1	0	0	0	41	21	0	21	51.2%	3
Subtotal, Area 3A		**940**	**370**	**52**	**551**	**89**	**13**	**0**	**0**	**0**	**940**	**459**	**0**	**459**	**48.83%**	**62**
Agdaagux Tribe of King Cove	3B	72	28	0	47	10	1	0	0	0	72	38	0	38	52.8%	1
Chignik Lake Village	3B	11	1	1	10	0	0	0	0	0	11	1	0	1	9.1%	1

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Table 3.–Page 4 of 15.

Tribal name	Regulatory areas	First Mailing			Second Mailing			Third Mailing			Totals					
		Surveys mailed	Surveys returned	Surveys returned undeliverable	Surveys mailed	Surveys returned	Surveys returned undeliverable	Surveys Mailed	Surveys returned	Surveys returned undeliverable	SHARCs issued	Returned by mail	Returned through staff	Response	Response rate	Undeliverable
Ivanoff Bay Village	3B	8	4	0	4	0	0	0	0	0	8	4	0	4	50.0%	0
Native Village of Belkofski	3B	5														
Native Village of Chignik	3B	7	7	0	0	0	0	0	0	0	7	7	0	7	100.0%	0
Native Village of Chignik Lagoon	3B	20	9	0	14	0	0	0	0	0	20	9	0	9	45.0%	0
Native Village of False Pass	3B	1														
Native Village of Nelson Lagoon	3B	3														
Native Village of Perryville	3B	22	11	2	9	3	0	0	0	0	22	14	0	14	63.6%	2
Native Village of Unga	3B	8	3	2	4	0	0	0	0	0	8	3	0	3	37.5%	2
Pauloff Harbor Village	3B	48	13	9	27	1	0	0	0	0	48	14	0	14	29.2%	9
Qagan Toyagungin Tribe of Sand Point Village	3B	86	34	3	58	12	0	0	0	0	86	46	0	46	53.5%	3
Subtotal, Area 3B		**291**	**114**	**17**	**178**	**27**	**1**	**0**	**0**	**0**	**291**	**141**	**0**	**141**	**48.45%**	**18**
Native Village of Akutan	4A	21	5	0	16	2	0	0	0	0	21	7	0	7	33.3%	0
Qawalingin Tribe of Unalaska	4A	36	10	0	26	3	0	0	0	0	36	13	0	13	36.1%	0
Subtotal, Area 4A		**57**	**15**	**0**	**42**	**5**	**0**	**0**	**0**	**0**	**57**	**20**	**0**	**20**	**35.09%**	**0**
Native Village of Atka	4B	5														
Subtotal, Area 4B		**5**	**2**	**1**	**2**	**0**	**1**	**0**	**0**	**0**	**5**	**2**	**0**	**2**	**40.00%**	**1**

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Table 3.–Page 5 of 15.

Tribal name	Regulatory areas	First Mailing			Second Mailing			Third Mailing			Totals					
		Surveys mailed	Surveys returned	Surveys returned undeliverable	Surveys mailed	Surveys returned	Surveys returned undeliverable	Surveys Mailed	Surveys returned	Surveys returned undeliverable	SHARCs issued	Returned by mail	Returned through staff	Response	Response rate	Undeliverable
Pribilof Islands Aleut Community of St. George	4C	6	3	0	4	1	0	0	0	0	6	4	0	4	66.7%	0
Pribilof Islands Aleut Community of St. Paul	4C	42	11	0	33	2	0	0	0	0	42	13	0	13	31.0%	0
Subtotal, Area 4C		**48**	**14**	**0**	**37**	**3**	**0**	**0**	**0**	**0**	**48**	**17**	**0**	**17**	**35.42%**	**0**
Native Village of Diomede (Inalik)	4D	1														
Native Village of Gambell	4D	1														
Native Village of Savoonga	4D	18	8	1	10	2	0	0	0	0	18	10	0	10	55.6%	1
Subtotal, Area 4D		**20**	**9**	**1**	**11**	**2**	**0**	**0**	**0**	**0**	**20**	**11**	**0**	**11**	**55.00%**	**1**
Chevak Native Village (Kashunamiut)	4E	3														
Chinik Eskimo Community	4E	1														
Egegik Village	4E	1														
King Island Native Community	4E	1														
Levelock Village	4E	1														
Manokotak Village	4E	1														
Naknek Native Village	4E	8	0	1	7	1	0	0	0	0	8	1	0	1	12.5%	1
Native Village of Aleknagik	4E	6	1	0	5	2	0	0	0	0	6	3	0	3	50.0%	0
Native Village of Brevig Mission	4E	1														

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Table 3.–Page 6 of 15.

Tribal name	Regulatory areas	First Mailing			Second Mailing			Third Mailing			Totals					
		Surveys mailed	Surveys returned	Surveys returned undeliverable	Surveys mailed	Surveys returned	Surveys returned undeliverable	Surveys Mailed	Surveys returned	Surveys returned undeliverable	SHARCs issued	Returned by mail	Returned through staff	Response	Response rate	Undeliverable
Native Village of Council	4E	4														
Native Village of Dillingham (Curyung)	4E	16	6	2	9	1	0	0	0	0	16	7	0	7	43.8%	2
Native Village of Eek	4E	7	3	0	5	0	0	0	0	0	7	3	0	3	42.9%	0
Native Village of Goodnews Bay (Mumtraq)	4E	4														
Native Village of Hooper Bay	4E	16	6	0	12	0	0	0	0	0	16	6	0	6	37.5%	0
Native Village of Kanakanak	4E	1														
Native Village of Kipnuk	4E	13	1	0	12	1	0	0	0	0	13	2	0	2	15.4%	0
Native Village of Kongiganak	4E	5														
Native Village of Koyuk	4E	1														
Native Village of Kwigillingok	4E	4														
Native Village of Kwinhagak	4E	3														
Native Village of Mekoryuk	4E	6	3	0	2	0	0	0	0	0	6	3	0	3	50.0%	0
Native Village of Nightmute	4E	1														
Native Village of Scammon Bay	4E	3														
Native Village of Shaktoolik	4E	1														

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Table 3.–Page 7 of 15.

Tribal name	Regulatory areas	First Mailing			Second Mailing			Third Mailing			Totals					
		Surveys mailed	Surveys returned	Surveys returned undeliverable	Surveys mailed	Surveys returned	Surveys returned undeliverable	Surveys Mailed	Surveys returned	Surveys returned undeliverable	SHARCs issued	Returned by mail	Returned through staff	Response	Response rate	Undeliverable
Native Village of Toksook Bay (Nunakauyak)	4E	33	12	0	21	0	0	0	0	0	33	12	0	12	36.4%	0
Native Village of Tununak	4E	13	3	0	10	0	0	0	0	0	13	3	0	3	23.1%	0
Native Village of Unalakleet	4E	3														
Native Village of Wales	4E	1														
Newtok Village	4E	1														
Nome Eskimo Community	4E	15	7	0	8	1	2	0	0	0	15	8	0	8	53.3%	2
Orutsararmuit Native Village	4E	9	3	0	7	0	0	0	0	0	9	3	0	3	33.3%	0
South Naknek Village	4E	1														
Stebbins Community Association	4E	4														
Traditional Village of Togiak	4E	3														
Twin Hills Village	4E	1														
Ugashik Village	4E	2														
Village of Chefornak	4E	14	6	0	8	0	0	0	0	0	14	6	0	6	42.9%	0
Village of Clark's Point	4E	1														
Village of Kotlik	4E	1														
Subtotal, Area 4E		**210**	**68**	**6**	**141**	**8**	**7**	**0**	**0**	**0**	**210**	**76**	**1**	**77**	**36.67%**	**13**
Tribal name subtotals		**3,906**	**1,371**	**217**	**2,453**	**302**	**57**	**0**	**0**	**0**	**3,906**	**1,673**	**352**	**2,025**	**51.8%**	**266**

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Table 3.–Page 8 of 15.

Rural community	Regulatory areas	First Mailing			Second Mailing			Third Mailing			Totals					
		Surveys mailed	Surveys returned	Surveys returned undeliverable	Surveys mailed	Surveys returned	Surveys returned undeliverable	Surveys Mailed	Surveys returned	Surveys returned undeliverable	SHARCs issued	Returned by mail	Returned through staff	Response	Response rate	Undeliverable
Angoon	2C	16	7	1	9	0	2	0	0	0	16	7	9	16	100.0%	2
Coffman Cove	2C	49	27	0	24	14	0	0	0	0	49	41	0	41	83.7%	0
Craig	2C	376	188	18	199	48	7	0	0	0	376	236	2	238	63.3%	22
Edna Bay	2C	37	18	0	25	5	2	0	0	0	37	23	1	24	64.9%	2
Elfin Cove	2C	15	6	2	7	5	0	0	0	0	15	11	0	11	73.3%	2
Gustavus	2C	61	37	2	25	8	1	0	0	0	61	45	0	45	73.8%	3
Haines	2C	426	258	12	171	51	3	0	0	0	426	309	0	309	72.5%	14
Hollis	2C	44	32	3	15	3	2	0	0	0	44	35	0	35	79.5%	5
Hoonah	2C	99	67	3	36	13	1	0	0	0	99	80	0	80	80.8%	4
Hydaburg	2C	10	6	1	3	0	0	0	0	0	10	6	2	8	80.0%	1
Hyder	2C	32	19	1	15	5	1	0	0	0	32	24	0	24	75.0%	1
Juneau	2C	3														
Kake	2C	35	20	2	13	7	0	0	0	0	35	27	0	27	77.1%	2
Kasaan	2C	8	2	0	4	0	0	0	0	0	8	2	2	4	50.0%	0
Ketchikan	2C	5														
Klawock	2C	155	85	7	70	16	1	0	0	0	155	101	1	102	65.8%	8
Klukwan	2C	2														
Metlakatla	2C	32	19	2	14	2	0	0	0	0	32	21	0	21	65.6%	2
Meyers Chuck	2C	9	8	0	4	1	0	0	0	0	9	9	0	9	100.0%	0
Naukati Bay	2C	40	24	2	15	2	2	0	0	0	40	26	4	30	75.0%	4
Pelican	2C	40	20	0	22	7	4	0	0	0	40	27	0	27	67.5%	4
Petersburg	2C	875	516	23	383	107	5	0	0	0	875	623	0	623	71.2%	27
Port Alexander	2C	26	14	0	12	1	0	0	0	0	26	15	0	15	57.7%	0
Port Protection	2C	16	5	1	10	5	0	0	0	0	16	10	1	11	68.8%	1
Pt. Baker	2C	15	5	0	10	6	0	0	0	0	15	11	0	11	73.3%	0
Saxman	2C	11	6	1	4	0	0	0	0	0	11	6	0	6	54.5%	1
Sitka	2C	1,363	698	78	652	114	20	0	0	0	1,363	812	60	872	64.0%	96
Skagway	2C	51	32	2	20	4	0	0	0	0	51	36	0	36	70.6%	2
Tenakee Springs	2C	53	39	0	22	7	0	0	0	0	53	46	0	46	86.8%	0
Thorne Bay	2C	119	74	2	50	16	2	0	0	0	119	90	0	90	75.6%	4
Ward Cove	2C	2														
Whale Pass	2C	18	16	0	3	2	0	0	0	0	18	18	0	18	100.0%	0

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Table 3.–Page 9 of 15.

Rural community	Regulatory areas	First Mailing			Second Mailing			Third Mailing			Totals					
		Surveys mailed	Surveys returned	Surveys returned undeliverable	Surveys mailed	Surveys returned	Surveys returned undeliverable	Surveys Mailed	Surveys returned	Surveys returned undeliverable	SHARCs issued	Returned by mail	Returned through staff	Response	Response rate	Undeliverable
Wrangell	2C	377	238	19	145	36	2	0	0	0	377	274	0	274	72.7%	21
Subtotal, Area 2C		**4,420**	**2,492**	**182**	**1,988**	**486**	**55**	**0**	**0**	**0**	**4,420**	**2,978**	**84**	**3,062**	**69.3%**	**228**
Chenega Bay	3A	7	7	0	0	0	0	0	0	0	7	7	0	7	100.0%	0
Chiniak	3A	3														
Cordova	3A	498	293	13	215	56	10	0	0	0	498	349	0	349	70.1%	23
Karluk	3A	6	3	0	3	3	0	0	0	0	6	6	0	6	100.0%	0
Kodiak	3A	1,552	722	142	762	126	29	0	0	0	1,552	848	0	848	54.6%	170
Larsen Bay	3A	6	3	1	4	0	0	0	0	0	6	3	0	3	50.0%	1
Nanwalek	3A	7	4	0	4	0	0	0	0	0	7	4	0	4	57.1%	0
Old Harbor	3A	7	4	1	2	0	0	0	0	0	7	4	0	4	57.1%	1
Ouzinkie	3A	13	9	0	6	0	0	0	0	0	13	9	0	9	69.2%	0
Port Graham	3A	10	6	1	4	0	0	0	0	0	10	6	0	6	60.0%	1
Port Lions	3A	11	6	0	8	2	0	0	0	0	11	8	0	8	72.7%	0
Seldovia	3A	144	77	1	75	31	1	0	0	0	144	108	0	108	75.0%	1
Tatitlek	3A	10	6	0	7	0	0	0	0	0	10	6	0	6	60.0%	0
Yakutat	3A	74	43	0	34	10	1	0	0	0	74	53	0	53	71.6%	1
Subtotal, Area 3A		**2,348**	**1,186**	**159**	**1,124**	**228**	**41**	**0**	**0**	**0**	**2,348**	**1,414**	**0**	**1,414**	**60.2%**	**198**
Chignik	3B	1														
Chignik Lagoon	3B	1														
Chignik Lake	3B	1														
Cold Bay	3B	32	23	2	8	4	0	0	0	0	32	27	0	27	84.4%	2
False Pass	3B	1														
King Cove	3B	25	11	2	17	4	0	0	0	0	25	15	0	15	60.0%	2
Nelson Lagoon	3B	1														
Perryville	3B	1														
Sand Point	3B	15	4	0	11	2	1	0	0	0	15	6	0	6	40.0%	1
Subtotal, Area 3B		**78**	**39**	**5**	**41**	**11**	**1**	**0**	**0**	**0**	**78**	**50**	**0**	**50**	**64.1%**	**6**
Unalaska	4A	119	67	8	53	9	0	0	0	0	119	76	0	76	63.9%	8
Subtotal, Area 4A		**119**	**67**	**8**	**53**	**9**	**0**	**0**	**0**	**0**	**119**	**76**	**0**	**76**	**63.9%**	**8**
Adak	4B	5														
Subtotal, Area 4B		**5**	**2**	**1**	**2**	**1**	**1**	**0**	**0**	**0**	**5**	**3**	**0**	**3**	**60.0%**	**2**

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Table 3.–Page 10 of 15.

Rural community	Regulatory areas	First Mailing			Second Mailing			Third Mailing			Totals					
		Surveys mailed	Surveys returned	Surveys returned undeliverable	Surveys mailed	Surveys returned	Surveys returned undeliverable	Surveys Mailed	Surveys returned	Surveys returned undeliverable	SHARCs issued	Returned by mail	Returned through staff	Response	Response rate	Undeliverable
St. George Island	4C	1														
Subtotal, Area 4C		**1**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0.0%**	**0**
Aleknagik	4E	2														
Bethel	4E	1														
Chefornak	4E	1														
Dillingham	4E	23	13	2	8	4	0	0	0	0	23	17	0	17	73.9%	2
Egegik	4E	1														
King Salmon	4E	2														
Kongiganak	4E	1														
Manokotak	4E	2														
Naknek	4E	6	2	0	4	0	0	0	0	0	6	2	0	2	33.3%	0
Nightmute	4E	1														
Nome	4E	20	10	2	8	1	0	0	0	0	20	11	0	11	55.0%	2
Port Heiden	4E	3														
Quinhagak	4E	1														
South Naknek	4E	1														
Teller	4E	10	1	0	9	1	0	0	0	0	10	2	0	2	20.0%	0
Togiak	4E	1														
Subtotal, Area 4E		**76**	**31**	**5**	**40**	**9**	**0**	**0**	**0**	**0**	**76**	**40**	**0**	**40**	**52.6%**	**5**
Rural community subtotals		**7,047**	**3,817**	**360**	**3,249**	**744**	**98**	**0**	**0**	**0**	**7,047**	**4,561**	**84**	**4,645**	**65.9%**	**447**
Tribal–Rural Totals		**10,953**	**5,188**	**577**	**5,702**	**1,046**	**155**	**0**	**0**	**0**	**10,953**	**6,234**	**436**	**6670**	**60.9%**	**713**

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City of residence	State of residence	First Mailing			Second Mailing			Third Mailing			Totals					
		Surveys mailed	Surveys returned	Surveys returned undeliverable	Surveys mailed	Surveys returned	Surveys returned undeliverable	Surveys Mailed	Surveys returned	Surveys returned undeliverable	SHARCs issued	Returned by mail	Returned through staff	Response	Response rate	Undeliverable
Adak	AK	8	3	1	4	1	1	0	0	0	8	4	0	4	50.0%	2
Akhiok	AK	6	0	1	5	1	0	0	0	0	6	1	0	1	16.7%	1
Akiachak	AK	1														
Akutan	AK	16	2	0	14	2	0	0	0	0	16	4	0	4	25.0%	0
Aleknagik	AK	3														
Anchor Point	AK	12	6	0	6	0	0	0	0	0	12	6	0	6	50.0%	0
Anchorage	AK	219	85	27	114	17	8	0	0	0	219	102	0	102	46.6%	35
Angoon	AK	109	27	1	78	4	7	0	0	0	109	31	65	96	88.1%	7
Atka	AK	1														
Auke Bay	AK	5														
Barrow	AK	1														
Bethel	AK	8	1	0	7	0	0	0	0	0	8	1	0	1	12.5%	0
Chefornak	AK	14	6	0	8	0	0	0	0	0	14	6	0	6	42.9%	0
Chenega Bay	AK	8	8	0	0	0	0	0	0	0	8	8	0	8	100.0%	0
Chevak	AK	2														
Chignik	AK	10	8	0	2	0	0	0	0	0	10	8	0	8	80.0%	0
Chignik Lagoon	AK	13	4	0	11	0	0	0	0	0	13	4	0	4	30.8%	0
Chignik Lake	AK	4														
Chiniak	AK	18	10	0	10	1	0	0	0	0	18	11	0	11	61.1%	0
Chugiak	AK	3														
Clarks Point	AK	1														
Coffman Cove	AK	46	25	0	23	13	0	0	0	0	46	38	0	38	82.6%	0
Cold Bay	AK	35	26	2	8	4	0	0	0	0	35	30	0	30	85.7%	2
Cordova	AK	557	317	8	258	64	9	0	0	0	557	381	0	381	68.4%	17
Craig	AK	510	273	26	249	53	7	0	0	0	510	326	0	326	63.9%	30
Dillingham	AK	30	14	3	13	5	0	0	0	0	30	19	0	19	63.3%	3
Douglas	AK	17	2	6	9	2	1	0	0	0	17	4	0	4	23.5%	7
Dutch Harbor	AK	80	41	5	40	7	0	0	0	0	80	48	0	48	60.0%	5
Eagle River	AK	8	6	0	3	0	0	0	0	0	8	6	0	6	75.0%	0
Edna Bay	AK	28	15	0	19	3	0	0	0	0	28	18	0	18	64.3%	0
Eek	AK	6	2	0	5	0	0	0	0	0	6	2	0	2	33.3%	0
Egegik	AK	1														
Elfin Cove	AK	14	6	2	6	4	0	0	0	0	14	10	0	10	71.4%	2

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Table 3.–Page 12 of 15.

		First Mailing			Second Mailing			Third Mailing			Totals					
City of residence	State of residence	Surveys mailed	Surveys returned	Surveys returned undeliverable	Surveys mailed	Surveys returned	Surveys returned undeliverable	Surveys Mailed	Surveys returned	Surveys returned undeliverable	SHARCs issued	Returned by mail	Returned through staff	Response	Response rate	Undeliverable
Elmemdorf AFB	AK	1														
Ester	AK	1														
Fairbanks	AK	7	4	2	2	0	0	0	0	0	7	4	0	4	57.1%	2
False Pass	AK	1														
Fritz Creek	AK	1														
Gakona	AK	1														
Gambell	AK	1														
Girdwood	AK	1														
Glennallen	AK	1														
Golovin	AK	1														
Goodnews Bay	AK	4														
Gustavus	AK	58	37	2	22	6	0	0	0	0	58	43	0	43	74.1%	2
Haines	AK	473	276	11	208	58	2	0	0	0	473	334	0	334	70.6%	12
Hollis	AK	1														
Homer	AK	25	13	2	9	1	0	0	0	0	25	14	0	14	56.0%	2
Hoonah	AK	236	114	16	117	29	3	0	0	0	236	143	1	144	61.0%	19
Hooper Bay	AK	14	6	0	10	0	0	0	0	0	14	6	0	6	42.9%	0
Hydaburg	AK	120	32	2	87	0	0	0	0	0	120	32	84	116	96.7%	2
Hyder	AK	31	19	1	14	5	1	0	0	0	31	24	0	24	77.4%	1
Juneau	AK	349	91	35	234	26	8	0	0	0	349	117	0	117	33.5%	43
Kake	AK	110	64	2	48	19	0	0	0	0	110	83	0	83	75.5%	2
Karluk	AK	9	3	0	6	3	0	0	0	0	9	6	0	6	66.7%	0
Kasaan	AK	15	4	5	3	1	0	0	0	0	15	5	0	5	33.3%	5
Kasilof	AK	13	7	2	7	1	1	0	0	0	13	8	0	8	61.5%	3
Kenai	AK	108	45	8	66	9	2	0	0	0	108	54	0	54	50.0%	9
Ketchikan	AK	571	160	27	395	30	14	0	0	0	571	190	195	385	67.4%	40
King Cove	AK	87	30	1	63	12	0	0	0	0	87	42	0	42	48.3%	1
King Salmon	AK	2														
Kipnuk	AK	12	1	0	11	1	0	0	0	0	12	2	0	2	16.7%	0
Klawock	AK	237	104	6	141	23	2	0	0	0	237	127	0	127	53.6%	8
Klukwan	AK	2														

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Table 3.–Page 13 of 15.

City of residence	State of residence	First Mailing			Second Mailing			Third Mailing			Totals					
		Surveys mailed	Surveys returned	Surveys returned undeliverable	Surveys mailed	Surveys returned	Surveys returned undeliverable	Surveys Mailed	Surveys returned	Surveys returned undeliverable	SHARCs issued	Returned by mail	Returned through staff	Response	Response rate	Undeliverable
Kodiak	AK	1702	775	150	853	136	30	0	0	0	1702	911	0	911	53.5%	179
Kongiganak	AK	6	2	0	4	1	0	0	0	0	6	3	0	3	50.0%	0
Kotzebue	AK	1														
Kwigillingok	AK	3														
Larsen Bay	AK	33	15	1	21	4	3	0	0	0	33	19	0	19	57.6%	3
Manokotak	AK	2														
Mekoryuk	AK	5														
Metlakatla	AK	193	63	8	129	26	0	0	0	0	193	89	0	89	46.1%	8
Meyers Chuck	AK	8	7	0	4	1	0	0	0	0	8	8	0	8	100.0%	0
Naknek	AK	9	2	0	7	1	0	0	0	0	9	3	0	3	33.3%	0
Nanwalek	AK	48	15	0	36	6	0	0	0	0	48	21	0	21	43.8%	0
Naukati	AK	25	16	0	10	4	3	0	0	0	25	20	0	20	80.0%	3
Nelson Lagoon	AK	1														
Newtok	AK	1														
Nightmute	AK	2														
Nikiski	AK	9	1	0	8	1	0	0	0	0	9	2	0	2	22.2%	0
Ninilchik	AK	38	16	3	19	3	0	0	0	0	38	19	0	19	50.0%	3
Nome	AK	23	13	1	9	1	0	0	0	0	23	14	0	14	60.9%	1
North Pole	AK	4														
Old Harbor	AK	41	17	4	21	3	0	0	0	0	41	20	0	20	48.8%	4
Ouzinkie	AK	47	20	0	29	5	0	0	0	0	47	25	0	25	53.2%	0
Palmer	AK	10	2	1	7	1	0	0	0	0	10	3	0	3	30.0%	1
Pelican	AK	45	23	0	25	8	4	0	0	0	45	31	0	31	68.9%	4
Perryville	AK	18	8	2	8	4	0	0	0	0	18	12	0	12	66.7%	2
Petersburg	AK	961	555	26	431	121	6	0	0	0	961	676	0	676	70.3%	31
Pilot Point	AK	2														
Point Baker	AK	20	7	1	12	8	0	0	0	0	20	15	0	15	75.0%	1
Port Alexander	AK	28	16	0	11	1	0	0	0	0	28	17	0	17	60.7%	0
Port Graham	AK	47	17	1	31	12	1	0	0	0	47	29	0	29	61.7%	2
Port Heiden	AK	2														
Port Lions	AK	39	21	0	22	6	0	0	0	0	39	27	0	27	69.2%	0
Port Protection	AK	2														
Port William	AK	1														

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City of residence	State of residence	First Mailing			Second Mailing			Third Mailing			Totals					
		Surveys mailed	Surveys returned	Surveys returned undeliverable	Surveys mailed	Surveys returned	Surveys returned undeliverable	Surveys Mailed	Surveys returned	Surveys returned undeliverable	SHARCs issued	Returned by mail	Returned through staff	Response	Response rate	Undeliverable
Quinhagak	AK	5														
Sand Point	AK	130	50	9	81	11	1	0	0	0	130	61	0	61	46.9%	10
Savoonga	AK	17	7	1	9	2	0	0	0	0	17	9	0	9	52.9%	1
Saxman	AK	12	0	3	10	0	1	0	0	0	12	0	1	1	8.3%	3
Seldovia	AK	152	76	2	82	29	1	0	0	0	152	105	0	105	69.1%	2
Seward	AK	12	3	3	6	0	1	0	0	0	12	3	0	3	25.0%	4
Sitka	AK	1635	795	95	817	131	25	0	0	0	1635	926	88	1014	62.0%	117
Skagway	AK	56	37	2	21	4	0	0	0	0	56	41	0	41	73.2%	2
Soldotna	AK	44	22	2	20	3	0	0	0	0	44	25	0	25	56.8%	2
St. George Island	AK	4														
St. Paul Island	AK	41	11	0	31	1	0	0	0	0	41	12	0	12	29.3%	0
Sterling	AK	4														
Tatitlek	AK	15	7	0	10	1	0	0	0	0	15	8	0	8	53.3%	0
Teller	AK	10	1	0	9	1	0	0	0	0	10	2	0	2	20.0%	0
Tenakee Springs	AK	53	39	0	22	7	0	0	0	0	53	46	0	46	86.8%	0
Thorne Bay	AK	114	74	2	45	15	0	0	0	0	114	89	0	89	78.1%	2
Togiak	AK	4														
Toksook Bay	AK	32	12	0	20	0	0	0	0	0	32	12	0	12	37.5%	0
Trapper Creek	AK	1														
Tununak	AK	11	3	0	8	0	0	0	0	0	11	3	0	3	27.3%	0
Twin Hills	AK	2														
Unalakleet	AK	1														
Unalaska	AK	75	37	3	39	6	1	0	0	0	75	43	0	43	57.3%	3
Valdez	AK	38	20	0	22	1	0	0	0	0	38	21	0	21	55.3%	0
Ward Cove	AK	32	10	1	21	4	0	0	0	0	32	14	0	14	43.8%	1
Wasilla	AK	43	13	6	25	3	3	0	0	0	43	16	0	16	37.2%	9
Whale Pass	AK	8	8	0	1	0	0	0	0	0	8	8	0	8	100.0%	0
Whittier	AK	2														
Willow	AK	2														
Wrangell	AK	476	299	22	187	38	3	0	0	0	476	337	2	339	71.2%	25
Yakutat	AK	110	57	0	61	16	1	0	0	0	110	73	0	73	66.4%	1
Subtotal, AK		**10,804**	**5,123**	**557**	**5,634**	**1,036**	**150**	**0**	**0**	**0**	**10,804**	**6,159**	**436**	**6,595**	**61.0%**	**690**

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Table 3.–Page 15 of 15.

City of residence	Regulatory areas	First Mailing			Second Mailing			Third Mailing			Totals					
		Surveys mailed	Surveys returned	Surveys returned undeliverable	Surveys mailed	Surveys returned	Surveys returned undeliverable	Surveys Mailed	Surveys returned	Surveys returned undeliverable	SHARCs issued	Returned by mail	Returned through staff	Response	Response rate	Undeliverable
Subtotal, non-Alaska residents		**149**	**65**	**20**	**68**	**10**	**5**	**0**	**0**	**0**	**149**	**75**	**0**	**75**	**50.3%**	**23**
City of residence totals		**10,953**	**5,188**	**577**	**5,702**	**1,046**	**155**	**0**	**0**	**0**	**10,953**	**6,234**	**436**	**6,670**	**60.9%**	**713**

a. To protect confidentiality, data for tribes and communities with 5 or fewer surveys mailed are not reported in this table. Subtotals include all tribes and communities.

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Table 4.–Estimated subsistence harvests of halibut.

		Return rate			Subsistence fished halibut		Subsistence halibut harvest		Sport fished halibut		Sport halibut harvest		Lingcod bycatch		Rockfish bycatch	
SHARC[a] type	Regulatory area	SHARCs issued	Surveys returned	Percent	Estimated number respondents	Percent of SHARCs	Estimated number fish	Estimated number of pounds[c]	Estimated number respondents	Percent of SHARCs	Estimated number fish	Estimated number of pounds[c]	Estimated number respondents	Estimated number fish	Estimated number respondents	Estimated number fish
Tribal[b]	2C	2,335	1,298	55.6%	859	36.8%	8,245	168,965	310	13.3%	1,032	18,652	112	556	252	2,578
Tribal	3A	940	459	48.8%	372	39.6%	6,247	95,359	153	16.2%	632	13,555	63	308	84	1,560
Tribal	3B	291	141	48.5%	134	46.0%	1,209	17,243	39	13.4%	166	3,368	8	76	17	138
Tribal	4A	57	20	35.1%	29	51.2%	197	3,022	9	15.0%	15	123	3	15	12	123
Tribal	4B	5	2	40.0%	3	50.0%	18	263	3	50.0%	3	53	0	0	0	0
Tribal	4C	48	17	35.4%	25	52.9%	515	10,859	0	0.0%	0	0	2	5	3	50
Tribal	4D	20	11	55.0%	7	33.3%	42	1,270	0	0.0%	0	0	2	15	2	17
Tribal	4E	210	77	36.7%	73	34.8%	911	11,589	17	8.3%	106	1,518	4	10	6	29
Subtotal, tribal		**3,906**	**2,025**	**51.8%**	**1,502**	38.5%	**17,384**	**308,569**	**530**	**13.6%**	**1,953**	**37,268**	**194**	**984**	**376**	**4,496**
Rural[b]	2C	4,420	3,062	69.3%	2161	48.9%	13,591	261,900	1,014	22.9%	3,372	54,065	385	1,271	685	5,308
Rural	3A	2,348	1,414	60.2%	1202	51.2%	11,237	208,273	682	29.1%	3,080	54,636	142	521	242	2,637
Rural	3B	78	50	64.1%	42	53.9%	357	6,490	23	29.3%	35	485	6	44	12	128
Rural	4A	119	76	63.9%	69	58.4%	693	11,456	46	38.6%	208	2,638	4	44	7	283
Rural	4B	5	3	60.0%	3	60.0%	22	210	0	0.0%	0	0	0	0	0	0
Rural	4C	1	0	0.0%	0	0.0%	0	0	0	0.0%	0	0	0	0	0	0
Rural	4D	0														
Rural	4E	76	40	52.6%	11	14.5%	48	661	1	1.8%	3	147	0	0	0	0
Subtotal, rural		**7,047**	**4,645**	**65.9%**	**3,489**	**49.5%**	**25,948**	**488,990**	**1,767**	**25.1%**	**6,698**	**111,972**	**537**	**1,880**	**947**	**8,356**
All[b]	2C	6,755	4,360	64.5%	3,020	44.7%	21,836	430,866	1,325	19.6%	4,404	72,717	497	1,827	937	7,886
All	3A	3,288	1,873	57.0%	1,574	47.9%	17,484	303,632	835	25.4%	3,712	68,191	206	828	326	4,198
All	3B	369	191	51.8%	176	47.7%	1,567	23,733	62	16.7%	200	3,853	14	120	29	266
All	4A	176	96	54.5%	99	56.0%	890	14,477	55	31.0%	223	2,761	7	59	18	406
All	4B	10	5	50.0%	6	55.0%	40	473	3	25.0%	3	53	0	0	0	0
All	4C	49	17	34.7%	25	51.8%	515	10,859	0	0.0%	0	0	2	5	3	50
All	4D	20	11	55.0%	7	33.3%	42	1,270	0	0.0%	0	0	2	15	2	17
All	4E	286	117	40.9%	84	29.4%	959	12,250	19	6.6%	109	1,665	4	10	6	29
Total		**10,953**	**6,670**	**60.9%**	**4,991**	**45.6%**	**43,332**	**797,560**	**2,297**	**21.0%**	**8,651**	**149,241**	**732**	**2,864**	**1,322**	**12,851**

Source ADF&G Division of Subsistence, SHARC survey, 2011.

a. Subsistence Halibut Registration Certificate (SHARC).

b. "Tribal" = individuals who obtained SHARCs as members of an eligible tribe, sorted by location of tribal headquarters. "Rural" = individuals who obtained SHARCs as residents of an eligible rural community. "All" = sum of tribal and rural SHARC holders for a regulatory area based on location of tribal headquarters or rural community. Because some SHARC holders may fish in regulatory areas other than the location of the area of their tribal headquarters or rural residence, area totals in this table differ slightly from those in tables 6, 7, and 9.

c. Pounds net (dressed) weight = 75% of round (whole) weight.

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Table 5.–Age of Subsistence Halibut Registration Certificate holders by SHARC type, 2010.

SHARC Type	Age (years) Number of SHARC Holders																				Totals
	0–4	5–9	10–14	15–19	20–24	25–29	30–34	35–39	40–44	45– 49	50–54	55–59	60–64	65–69	70–74	75–79	80–84	85–89	90–94	95+	
Tribal	11	72	116	171	260	256	269	263	343	438	461	423	322	217	153	78	32	17	2	1	3,906
	0.3%	1.8%	3.0%	4.4%	6.7%	6.6%	6.9%	6.7%	8.8%	11.2%	11.8%	10.8%	8.2%	5.6%	3.9%	2.0%	0.8%	0.4%	0.1%	0.0%	
Rural	10	51	112	198	223	403	546	532	638	811	960	913	733	466	271	113	51	12	2	1	7,047
	0.1%	0.7%	1.6%	2.8%	3.2%	5.7%	7.8%	7.6%	9.0%	11.5%	13.6%	13.0%	10.4%	6.6%	3.8%	1.6%	0.7%	0.2%	0.0%	0.0%	
Total	**21**	**123**	**228**	**369**	**483**	**659**	**816**	**796**	**981**	**1,249**	**1,421**	**1,336**	**1,055**	**683**	**424**	**191**	**83**	**29**	**4**	**2**	**10,953**
	0.2%	**1.1%**	**2.1%**	**3.4%**	**4.4%**	**6.0%**	**7.4%**	**7.3%**	**9.0%**	**11.4%**	**13.0%**	**12.2%**	**9.6%**	**6.2%**	**3.9%**	**1.7%**	**0.8%**	**0.3%**	**0.0%**	**0.0%**	

Source SHARC database, Restricted Access Management Program, NMFS, Juneau, as of 12/31/2010.

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Table 6.–Estimated harvests of halibut in numbers of fish and pounds net (dressed, head-off) weight by regulatory area and subarea, 2010.

			Estimated subsistence harvest by gear type[a]									Estimated sport harvest		
			Set hook gear			Hook and line or handline			All gear					
Subarea	Regulatory area	Number of SHARCs subsistence fished[c]	Estimated number respondents fished	Estimated number halibut harvested	Estimated pounds halibut harvested[b]	Estimated number respondents fished	Estimated number halibut harvested	Estimated pounds halibut harvested[b]	Estimated number respondents fished	Estimated number halibut harvested	Estimated pounds halibut harvested[b]	Estimated number respondents fished	Estimated number halibut harvested	Estimated pounds halibut harvested[b]
Southern Southeast Alaska	2C	1,618	1,373	9,797	207,535	671	2,927	46,831	1,618	12,725	254,366	833	2,928	47,523
Sitka Lamp Area	2C	718	657	3,118	68,532	229	586	8,456	718	3,704	76,988	236	529	8,960
Northern Southeast Alaska	2C	776	686	4,084	77,223	263	1,007	16,241	776	5,091	93,464	296	855	14,880
Subtotal, Area 2C		**3,013**	**2,625**	**16,999**	**353,290**	**1,118**	**4,521**	**71,528**	**3,013**	**21,520**	**424,818**	**1,313**	**4,312**	**71,364**
Yakutat Area	3A	66	53	543	13,296	29	191	4,768	66	734	18,064	15	76	1,198
Prince William Sound	3A	291	260	1,767	35,004	143	364	7,274	291	2,132	42,279	139	361	7,905
Cook Inlet	3A	228	138	2,780	36,870	157	2,607	28,939	228	5,386	65,809	126	579	9,008
Kodiak Island road system	3A	687	564	4,429	82,139	315	1,146	20,928	687	5,575	103,066	450	1,871	35,599
Kodiak Island–Other	3A	592	466	2,854	56,642	285	1,346	26,790	592	4,201	83,432	310	1,055	18,534
Subtotal, Area 3A		**1,631**	**1,283**	**12,374**	**223,951**	**807**	**5,654**	**88,699**	**1,631**	**18,028**	**312,650**	**887**	**3,943**	**72,244**
Chignik Area	3B	42	20	132	2,912	35	183	2,945	42	315	5,857	5	6	103
Lower Alaska Peninsula	3B	130	65	696	8,845	96	514	8,306	130	1,210	17,152	51	143	2,248
Subtotal, Area 3B		**171**	**84**	**829**	**11,757**	**130**	**697**	**11,251**	**171**	**1,525**	**23,009**	**56**	**148**	**2,351**
Eastern Aleutians–East	4A	99	61	429	7,046	66	409	6,297	99	838	13,343	53	217	2,682
Eastern Aleutians–West	4A	8	7	32	665	3	22	540	8	55	1,205	6	8	132
Subtotal, Area 4A		**101**	**62**	**461**	**7,711**	**67**	**431**	**6,837**	**101**	**892**	**14,548**	**57**	**225**	**2,814**
Western Aleutians–East	4B	10	6	22	210	4	14	240	10	36	450	3	21	432
Western Aleutians–Other	4B	0												
Subtotal, Area 4B		**10**	**6**	**22**	**210**	**4**	**14**	**240**	**10**	**36**	**450**	**3**	**21**	**432**
St. George Island	4C	6	5	23	563	5	8	158	6	30	720	0	0	0
St. Paul Island	4C	19	13	468	9,555	6	16	584	19	485	10,139	0	0	0
Subtotal, Area 4C		**25**	**17**	**491**	**10,118**	**11**	**24**	**742**	**25**	**515**	**10,859**	**0**	**0**	**0**
St. Lawrence Island	4D	4	2	32	843	2	6	328	4	38	1,171	0	0	0
Area 4D–Other	4D	0												
Subtotal, Area 4D		**4**	**2**	**32**	**843**	**2**	**6**	**328**	**4**	**38**	**1,171**	**0**	**0**	**0**
Bristol Bay	4E	4	4	0	0	0	0	0	4	0	0	2	2	35
Yukon Delta	4E	60	15	170	2,542	56	571	6,942	60	741	9,484	0	0	0
Norton Sound	4E	6	6	38	571	0	0	0	6	38	571	0	0	0
Kotzebue Sound	4E	0												
Subtotal, Area 4E		**70**	**25**	**208**	**3,113**	**56**	**571**	**6,942**	**70**	**779**	**10,055**	**2**	**2**	**35**
Total, Alaska[c]		**4,991**	**4,071**	**31,416**	**610,992**	**2,183**	**11,916**	**186,567**	**4,991**	**43,332**	**797,560**	**2,297**	**8,651**	**149,241**

Source ADF&G Division of Subsistence, SHARC survey, 2011.

a. "Setline" = longline or skate. "Hand-operated gear" = rod and reel, or handline.

b. Weights given are "net weight." Pounds net (dressed, head off) weight = 75% of round (whole) weight.

c. Because fishers may fish in more than one area, subtotals for regulatory areas and the state total might exceed the sum of the subarea values. Includes subsistence and sport fishing.

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Table 7.–Alaska subsistence halibut harvests from 2003–20010 by geographic area fished.

	Subsistence halibut harvests, net weight (lb)								Percent change between years		Percentage of state total							
Geographic area	2003	2004	2005	2006	2007	2008	2009	2010	2009 to 2010	7-year average to 2010	2003	2004	2005	2006	2007	2008	2009	2010
Southern Southeast Alaska	290,443	369,319	328,658	307,921	283,422	254,510	262,046	254,366	-2.9%	-15.1%	27.9%	31.0%	27.9%	27.4%	27.5%	28.7%	30.4%	31.9%
Sitka LAMP Area	173,323	147,312	133,545	147,526	132,190	104,973	89,812	76,988	-14.3%	-42.0%	16.6%	12.3%	11.3%	13.1%	12.8%	11.8%	10.4%	9.7%
Northern Southeast Alaska	159,772	160,453	135,869	124,670	109,286	98,877	105,139	93,464	-11.1%	-26.8%	15.3%	13.4%	11.5%	11.1%	10.6%	11.1%	12.2%	11.7%
Subtotal, Area 2C	**623,538**	**677,084**	**598,072**	**580,117**	**524,897**	**458,360**	**456,997**	**424,818**	**-7.0%**	**-24.1%**	**59.9%**	**56.7%**	**50.8%**	**51.6%**	**50.8%**	**51.7%**	**53.1%**	**53.3%**
Yakutat Area	11,198	20,153	36,515	19,187	17,516	16,084	14,390	18,064	25.5%	-6.4%	1.1%	1.7%	3.1%	1.7%	1.7%	1.8%	1.7%	2.3%
Prince William Sound	28,409	58,429	68,063	47,965	52,407	47,112	33,796	42,279	25.1%	-12.0%	2.7%	4.9%	5.8%	4.3%	5.1%	5.3%	3.9%	5.3%
Cook Inlet	52,609	83,939	79,024	59,965	75,623	76,795	81,043	65,809	-18.8%	-9.5%	5.1%	7.0%	6.7%	5.3%	7.3%	8.7%	9.4%	8.3%
Kodiak Island road system	114,028	129,145	134,849	140,388	130,538	96,872	108,049	103,066	-4.6%	-15.5%	11.0%	10.8%	11.4%	12.5%	12.6%	10.9%	12.5%	12.9%
Kodiak Island–Other	79,256	111,944	110,824	111,752	96,206	100,540	91,202	83,432	-8.5%	-16.8%	7.6%	9.4%	9.4%	9.9%	9.3%	11.3%	10.6%	10.5%
Subtotal, Area 3A	**285,500**	**403,610**	**429,275**	**379,258**	**372,289**	**337,403**	**328,480**	**312,650**	**-4.8%**	**-13.7%**	**27.4%**	**33.8%**	**36.4%**	**33.7%**	**36.1%**	**38.0%**	**38.1%**	**39.2%**
Chignik Area	10,500	12,053	14,783	17,780	15,397	11,842	5,889	5,857	-0.5%	-53.5%	1.0%	1.0%	1.3%	1.6%	1.5%	1.3%	0.7%	0.7%
Lower Alaska Peninsula	16,977	21,467	31,442	30,767	32,351	30,406	19,603	17,152	-12.5%	-34.4%	1.6%	1.8%	2.7%	2.7%	3.1%	3.4%	2.3%	2.2%
Subtotal, Area 3B	**27,477**	**33,519**	**46,225**	**48,547**	**47,748**	**42,248**	**25,492**	23,009	-9.7%	-40.6%	**2.6%**	**2.8%**	**3.9%**	**4.3%**	**4.6%**	**4.8%**	**3.0%**	**2.9%**
Eastern Aleutians–East	19,345	26,715	33,882	25,993	12,753	19,043	33,090	13,343	-59.7%	-45.3%	1.9%	2.2%	2.9%	2.3%	1.2%	2.1%	3.8%	1.7%
Eastern Aleutians–West	1,852	2,162	1,734	1,069	2,193	509	409	1,205	194.7%	-15.0%	0.2%	0.2%	0.1%	0.1%	0.2%	0.1%	0.0%	0.2%
Subtotal, Area 4A	**21,197**	**28,877**	**35,615**	**27,062**	**14,946**	**19,553**	**33,499**	**14,548**	**-56.6%**	**-43.7%**	**2.0%**	**2.4%**	**3.0%**	**2.4%**	**1.4%**	**2.2%**	**3.9%**	**1.8%**
Western Aleutians–East	2,582	916	1,351	2,761	1,997	4,737	1,175	450	-61.7%	-79.7%	0.2%	0.1%	0.1%	0.2%	0.2%	0.5%	0.1%	0.1%
Western Aleutians–Other	0	0	0	0	0	0	0				0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Subtotal, Area 4B	**2,582**	**916**	**1,351**	**2,761**	**1,997**	**4,737**	**1,175**	**450**	-61.7%	-79.7%	**0.2%**	**0.1%**	**0.1%**	**0.2%**	**0.2%**	**0.5%**	**0.1%**	**0.1%**
St. George Island	2,042	1,823	2,145	3,443	3,736	1,150	700	720	2.9%	-66.5%	0.2%	0.2%	0.2%	0.3%	0.4%	0.1%	0.1%	0.1%
St. Paul Island	20,839	7,911	5,571	5,085	11,342	4,507	5,623	10,139	80.3%	16.6%	2.0%	0.7%	0.5%	0.5%	1.1%	0.5%	0.7%	1.3%
Subtotal, Area 4C	**22,881**	**9,734**	**7,716**	**8,527**	**15,077**	**5,657**	**6,323**	**10,859**	**71.7%**	**0.1%**	**2.2%**	**0.8%**	**0.7%**	**0.8%**	**1.5%**	**0.6%**	**0.7%**	**1.4%**
St. Lawrence Island	4,380	10,923	5,848	8,297	3,204	3,131	644	1,171	81.8%	-77.5%	0.4%	0.9%	0.5%	0.7%	0.3%	0.4%	0.1%	0.1%
Area 4D–Other	0	0	0	0	0	0	0				0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Subtotal, Area 4D	**4,380**	**10,923**	**5,848**	**8,297**	**3,204**	**3,131**	**644**	**1,171**	**81.8%**	**-77.5%**	**0.4%**	**0.9%**	**0.5%**	**0.7%**	**0.3%**	**0.4%**	**0.1%**	**0.1%**
Bristol Bay	435	203	2,169	1,336	2,116	84	0	0		-100.0%	0.0%	0.0%	0.2%	0.1%	0.2%	0.0%	0.0%	0.0%
YK Delta	53,284	28,298	51,950	69,407	50,019	14,669	7,468	9,484	27.0%	-75.9%	5.1%	2.4%	4.4%	6.2%	4.8%	1.7%	0.9%	1.2%
Norton Sound	56	0	0	0	0	1,145	1,281	571	-55.4%	61.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.1%	0.1%
Subtotal, Area 4E	**53,775**	**28,501**	**54,119**	**70,743**	**52,135**	**15,898**	**8,749**	**10,055**	14.9%	-75.2%	**5.2%**	**2.4%**	**4.6%**	**6.3%**	**5.1%**	**1.8%**	**1.0%**	**1.3%**
Total, Alaska[a]	**1,041,330**	**1,193,162**	**1,178,222**	**1,125,312**	**1,032,293**	**886,988**	**861,359**	**797,560**	-7.4%	-23.7%	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**

a. The sum of the harvests by geographic areas for 2003 reported here differs slightly from that reported in Table 8 in Fall et al (2004:50) due to rounding.

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Table 8.–Number of hooks usually fished, setline (stationary) gear, Alaska halibut subsistence fishery, 2010.

Regulatory area (No. of SHARC holders)		Number of hooks[b]																														
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	Missing	Total[a]
2C (6,755)	No.	6	16	9	4	28	16	3	14	1	147	3	46	5	2	373	9	0	10	0	448	0	8	10	17	202	16	12	101	18	1,013	95	2,630
	Pct.	0.2	0.6	0.4	0.1	1.0	0.6	0.1	0.5	0.0	5.6	0.1	1.8	0.2	0.1	14.2	0.3	0.0	0.4	0.0	17.0	0.0	0.3	0.4	0.7	7.7	0.6	0.4	3.8	0.7	38.5	3.6	
3A (3,288)	No.	13	6	5	4	8	5	3	7	0	77	4	20	2	0	52	8	4	7	3	214	2	0	2	10	129	11	6	24	16	537	64	1,240
	Pct.	1.0	0.5	0.4	0.3	0.7	0.4	0.2	0.5	0.0	6.2	0.3	1.6	0.1	0.0	4.2	0.6	0.3	0.5	0.3	17.2	0.1	0.0	0.1	0.8	10.4	0.9	0.5	2.0	1.3	43.3	8.6	
3B (369)	No.	10	0	0	0	0	1	0	0	0	4	0	0	2	0	2	0	0	2	0	15	2	0	0	0	0	0	0	2	0	34	8	82
	Pct.	12.0	0.0	0.0	0.0	0.0	1.4	0.0	0.0	0.0	4.9	0.0	0.0	2.4	0.0	2.6	0.0	0.0	2.4	0.0	18.8	2.4	0.0	0.0	0.0	0.0	0.0	0.0	2.7	0.0	41.2	11.4	
4A (176)	No.	0	0	0	0	0	0	0	0	0	9	0	1	0	0	4	0	0	0	0	10	0	0	0	0	3	0	0	0	0	31	0	58
	Pct.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	15.5	0.0	2.4	0.0	0.0	7.1	0.0	0.0	0.0	0.0	16.7	0.0	0.0	0.0	0.0	4.7	0.0	0.0	0.0	0.0	53.6	0.0	
4B (10)	No.	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	1	6
	Pct.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	45.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	36.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.3	
4C (49)	No.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	14	3	17
	Pct.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	82.8	6.7	
4D (20)	No.	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	5
	Pct.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	39.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	60.5	0.0	
4E (286)	No.	3	0	0	1	0	0	0	0	0	1	0	0	0	0	2	0	0	0	0	6	0	0	0	0	0	0	0	0	0	11	8	33
	Pct.	9.2	0.0	0.0	3.1	0.0	0.0	0.0	0.0	0.0	3.1	0.0	0.0	0.0	0.0	5.8	0.0	0.0	0.0	0.0	18.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	34.1	10.5	
Alaska (10,953)	No.	31	22	14	9	36	22	6	21	1	241	6	69	8	2	432	17	4	19	3	695	4	8	11	27	334	27	18	127	33	1,643	179	4,071
	Pct.	0.8	0.5	0.3	0.2	0.9	0.5	0.2	0.5	0.0	5.9	0.2	1.7	0.2	0.0	10.6	0.4	0.1	0.5	0.1	17.1	0.1	0.2	0.3	0.7	8.2	0.7	0.4	3.1	0.8	40.4	4.4	

Source ADF&G Division of Subsistence, SHARC Survey, 2011.

a. Number of fishers using setline (fixed) gear. Based on location of tribe or rural community of SHARC holder.

b. The column for 30 hooks includes those fishers who reported using more than 30. There is no 30-hook limit in Areas 4C, 4D, or 4E.

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Table 9.–Average net weight of subsistence and sport harvested halibut, 2010, by regulatory area fished.

	Subsistence methods			Sport harvest[a]			Total halibut		
Area[b]	Number	Net weight (lb)	Average per fish	Number	Net weight (lb)	Average per fish	Number	Net weight (lb)	Average per fish
2C	21,520	424,818	19.7	4,312	71,364	16.6	25,832	496,182	19.2
3A	18,028	312,650	17.3	3,943	72,244	18.3	21,971	384,894	17.5
3B	1,525	23,009	15.1	148	2,351	15.8	1,674	25,360	15.2
4A	892	14,548	16.3	225	2,814	12.5	1,117	17,362	15.5
4B	36	450	12.6	21	432	21.0	56	882	15.7
4C	515	10,859	21.1	0	0		515	10,859	21.1
4D	38	1,171	31.0	0	0		38	1,171	31.0
4E	779	10,055	12.9	2	35	17.5	781	10,090	12.9
Alaska	43,332	797,560	18.4	8,651	149,241	17.3	51,983	946,800	18.2

Source ADF&G Division of Subsistence, SHARC Survey, 2011.

a. Sport harvest of halibut by SHARC holders.

b. Area totals are based on the location of the harvest (see also Table 6 and Table 7).

Table 10.–Estimated harvests of lingcod and rockfish by regulatory area and subarea.

			Lingcod		Rockfish	
Subarea	Regulatory area	Estimated number SHARCs fished	Estimated number respondents harvested	Estimated number lingcod harvested	Estimated number respondents harvested	Estimated number rockfish harvested
Northern Southeast Alaska	2C	776	53	161	143	1,088
Sitka Lamp Area	2C	718	265	920	344	2,644
Southern Southeast Alaska	2C	1,618	197	719	482	3,956
Subtotal, Area 2C		**3,013**	**493**	**1,800**	**937**	**7,688**
Cook Inlet	3A	228	27	144	32	612
Kodiak Island Other	3A	592	71	242	127	1,101
Kodiak Island Road System	3A	687	90	260	157	1,528
Prince William Sound	3A	291	44	92	77	611
Yakutat Area	3A	66	29	142	18	574
Subtotal, Area 3A		**1,631**	**218**	**880**	**343**	**4,426**
Chignik Area	3B	42	0	0	6	33
Lower Alaska Peninsula	3B	130	8	102	20	209
Subtotal, Area 3B		**171**	**8**	**102**	**25**	**242**
Eastern Aleutians - East	4A	99	7	59	18	402
Eastern Aleutians - West	4A	8	0	0	1	4
Subtotal, Area 4A		**101**	**7**	**59**	**18**	**406**
Western Aleutians - East	4B	10	0	0	0	0
Subtotal, Area 4B		**10**	**0**	**0**	**0**	**0**
St. George Island	4C	6	2	5	3	50
St. Paul Island	4C	19	0	0	0	0
Subtotal, Area 4C		**25**	**2**	**5**	**3**	**50**
St. Lawrence Island	4D	4	2	15	2	17
Subtotal, Area 4D		**4**	**2**	**15**	**2**	**17**
Bristol Bay	4E	4	0	0	0	0
Norton Sound	4E	6	0	0	0	0
Yukon Delta	4E	60	3	3	3	23
Subtotal, Area 4E		**70**	**3**	**3**	**3**	**23**
Totals		**4,991**	**732**	**2,864**	**1,322**	**12,851**

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Table 11.–Estimated harvests of halibut by gear type and participation subsistence and sport fisheries, selected Alaska communities, 2003 through 2010.

			Subsistence harvests									
			Setline (fixed) gear		Hand-operated gear		Total subsistence harvest		Sport harvest[d]		All harvests	
Community[a]	Year	Number of SHARC holders[b]	Estimated number fished	Estimated pounds harvested	Estimated number fished	Estimated pounds harvested	Estimated number fished	Estimated pounds harvested	Estimated number fished	Estimated pounds harvested	Estimated number fished	Estimated pounds harvested
Cordova	2003	358	68	7,613	40	7,885	102	15,498	144	11,534	194	27,032
	2004	526	174	29,693	97	10,946	262	40,640	174	12,149	325	52,789
	2005	602	238	34,907	104	12,234	281	47,141	179	10,519	358	57,660
	2006	607	202	21,059	125	7,968	248	29,027	152	7,020	301	36,047
	2007	615	233	21,683	128	7,033	282	28,716	123	4,203	315	32,919
	2008	587	231	22,301	95	5,246	254	27,547	126	5,562	292	33,109
	2009	599	201	17,766	103	5,598	234	23,364	118	3,868	269	27,232
	2010	557	207	22,579	121	5,849	235	28,428	106	5,837	261	34,265
Kodiak	2003	1,320	438	101,575	278	51,678	646	153,254	498	68,170	858	221,424
	2004	1,561	554	131,719	335	55,605	802	187,214	581	73,181	971	260,395
	2005	1,741	650	146,781	398	64,047	871	210,828	669	82,455	1,116	293,283
	2006	1,716	684	142,326	497	63,496	961	205,822	562	64,320	1,092	270,142
	2007	1,880	707	135,351	486	58,282	945	193,633	648	68,556	1,157	262,189
	2008	1,725	763	128,226	479	49,108	963	177,334	693	72,915	1,213	250,249
	2009	1,826	749	130,802	433	46,966	923	177,769	619	64,034	1,139	241,803
	2010	1,702	747	127,816	374	36,275	900	164,092	539	47,646	1,074	211,738
Petersburg	2003	1,047	330	41,704	138	14,013	415	55,718	268	19,611	523	75,329
	2004	1,187	322	53,885	206	17,900	482	71,784	351	26,408	617	98,192
	2005	1,197	338	44,050	175	17,321	436	61,372	312	23,289	569	84,661
	2006	1,082	300	35,608	222	18,075	426	53,682	246	17,351	529	71,033
	2007	1,123	274	32,026	191	15,491	386	47,517	264	15,177	516	62,694
	2008	985	285	31,077	207	15,523	393	46,600	279	17,506	515	64,106
	2009	1,041	323	30,105	224	16,661	418	46,766	247	13,619	513	60,385
	2010	961	323	33,951	209	13,315	409	47,266	256	13,251	501	60,517
Port Graham	2003	52	10	4,398	28	7,056	35	11,454	3	156	36	11,610
	2004	57	15	4,425	31	4,755	42	9,181	11	850	42	10,031
	2005	52	8	7,938	18	3,190	18	11,127	9	488	18	11,615
	2006	50	9	2,397	24	3,797	30	6,194	2	0	30	6,194
	2007	59	22	5,347	28	3,146	36	8,493	4	233	36	8,726
	2008	48	13	6,896	23	2,200	30	9,097	2	51	30	9,148
	2009	47	22	1,454	31	4,973	35	6,426	9	197	35	6,623
	2010	47	23	5,011	18	2,211	30	7,222	5	267	30	7,489
Sand Point	2003	73	15	3,409	11	1,410	21	4,819	11	410	21	5,229
	2004	351	25	4,360	74	6,996	109	11,355	50	1,384	121	12,739
	2005	321	35	12,201	77	9,700	100	21,901	23	1,281	105	23,182
	2006	365	59	7,406	87	12,809	133	20,214	29	6,300	140	26,514
	2007	364	49	13,278	113	11,337	138	24,615	16	3,034	138	27,649

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Table 11.–Page 2 of 2.

			Subsistence harvests									
			Setline (fixed) gear		Hand-operated gear		Total subsistence harvest		Sport harvest[d]		All harvests	
Community[a]	Year	Number of SHARC holders[b]	Estimated number fished	Estimated pounds harvested	Estimated number fished	Estimated pounds harvested	Estimated number fished	Estimated pounds harvested	Estimated number fished	Estimated pounds harvested	Estimated number fished	Estimated pounds harvested
	2008	342	71	15,766	88	9,247	130	25,013	19	2,195	132	27,208
	2009	137	28	3,987	58	7,772	70	11,759	19	2,665	70	14,424
	2010	130	22	3,408	50	3,898	61	7,306	18	1,129	67	8,435
Sitka	2003	1,639	760	155,276	160	19,604	821	174,880	401	32,408	956	207,288
	2004	1,871	714	151,660	147	14,739	904	166,474	412	25,829	1,026	192,303
	2005	1,974	738	126,426	172	19,893	814	146,319	417	55,913	987	202,232
	2006	1,895	809	145,542	297	17,830	915	163,372	395	23,032	1,036	186,404
	2007	1,954	839	115,162	270	26,886	921	142,049	315	16,200	1,010	158,249
	2008	1,662	784	96,314	232	13,266	845	109,581	307	13,055	932	122,636
	2009	1,731	774	86,219	265	11,205	844	97,424	265	10,516	941	107,940
	2010	1,635	700	74,394	218	8,334	755	82,728	228	9,257	849	91,985
Toksook Bay	2003	532	8	3,790	47	20,709	54	24,500	0	0	54	24,500
	2004	529	7	859	44	5,737	56	6,596	0	0	56	6,596
	2005	522	5	602	60	14,269	61	14,870	2	98	62	14,968
	2006	533	6	2,333	112	34,149	113	36,481	0	0	113	36,481
	2007	533	17	1,451	100	6,469	112	7,921	0	0	112	7,921
	2008	34	6	707	8	1,436	9	2,143	0	0	9	2,143
	2009	33	3	266	10	789	10	1,055	0	0	10	1,055
	2010	32	5	315	10	560	10	875	0	0	10	875
Tununak	2003	0										
	2004	70	16	878	23	1,076	31	1,954	0	0	31	1,954
	2005	70	3	332	18	2,329	20	2,661	0	0	20	2,661
	2006	70	7	224	33	3,808	33	4,032	0	0	33	4,032
	2007	69	14	1,536	38	5,479	38	7,015	0	0	38	7,015
	2008	68	0	0	8	1,296	8	1,296	0	0	8	1,296
	2009	11	0	0	7	488	7	488	0	0	7	488
	2010	11	0	0	9	576	9	576	0	0	9	576
Unalaska[c]	2003	92	39	6,713	31	4,146	50	10,860	33	5,519	70	16,379
	2004	131	43	9,557	39	5,973	81	15,530	34	2,165	93	17,695
	2005	150	60	9,573	57	8,535	88	18,108	28	2,439	97	20,547
	2006	171	53	7,526	47	8,805	81	16,331	50	3,768	101	20,100
	2007	176	67	9,012	38	4,238	83	13,250	33	2,287	92	15,537
	2008	173	59	7,293	42	6,417	87	13,710	43	2,962	101	16,672
	2009	164	56	19,204	54	10,102	76	29,306	45	1,861	98	31,167
	2010	155	58	7,417	60	5,663	92	13,081	54	2,730	103	15,811

Source ADF&G Division of Subsistence, SHARC Surveys, 2004–2011.

a. For data on all communities for 2009, see Appendix tables E-4, E-5, and E-6.

b. SHARC = Subsistence halibut registration certificate; includes all SHARC holders living in the community.

c. Includes Dutch Harbor.

d. Sport harvests by SHARC holders only.

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Table 12.–Estimated harvests of halibut for home use, Sitka.

Year	Number of fishing households	Pounds usable (net) weight: Removed from commercial harvests	Rod and reel	Other methods[a]	Total	Total without commercial removal	95% confidence range (±%)[b]
1987	1,252	12,353	180,982		193,335	180,982	22
1996	943	16,528	135,048	14,196	165,772	149,244	28
Annual average	1,098	14,441	158,015	14,196	179,554	165,113	

Source Scott et al. 2001.

a. Harvest data not collected for "other methods" in 1987.

b. Pertains to estimate of total harvests.

Table 13.–Number of SHARCs issued, estimated number of subsistence halibut fishers, and estimated harvests by SHARC category, Sitka, 2003–2010.

	Rural SHARCs				Tribal SHARCs				All SHARC holders residing in Sitka			
Year	SHARCs	Subsistence fished	Harvest	Average harvest per fisher (lb)	SHARCs	Subsistence fished	Harvest	Average harvest per fisher (lb)	SHARCs	Subsistence fished	Harvest	Average harvest per fisher (lb)
2003	1,224	679	128,489	189.2	415	142	46,391	326.7	1,639	821	174,880	213.0
2004	1,464	785	135,532	172.7	407	119	30,942	260.0	1,871	904	166,474	184.2
2005	1,578	654	114,632	175.3	396	160	31,687	198.1	1,974	814	146,319	179.8
2006	1,429	759	120,735	159.1	466	156	42,637	273.6	1,895	915	163,372	178.6
2007	1,484	754	104,530	138.6	470	167	37,519	224.7	1,954	921	142,049	154.2
2008	1,388	722	87,945	121.8	274	123	21,636	175.9	1,662	845	109,581	129.7
2009	1,446	717	82,246	114.7	285	127	15,178	119.5	1,731	844	97,424	115.4
2010	1,363	632	69,779	110.5	272	124	12,949	104.6	1,635	755	82,728	109.5
Historical average (2003–2009)	1,430	724	110,587	152.7	388	142	32,284	227.4	1,818	866	142,871	164.9

Table 14.–Estimated harvests of halibut for home use, Petersburg.

Year	Number of fishing households	Pounds usable (net) weight: Removed from commercial harvests	Rod and reel	Other methods[a]	Total	Total without commercial removal	95% confidence range (±%)[b]
1987	604	11,728	107,448		119,176	107,448	51
2000	468	6,951	49,023	0	55,974	49,023	39
Annual average	536	9,339	78,236	0	87,575	78,236	

Source Scott et al. 2001; ADF&G Division of Subsistence, Household Survey, 2001.

a. Harvest data not collected for "other methods" in 1987.

b. Pertains to estimate of total harvests.

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Table 15.–Estimated harvests of halibut for home use, Cordova.

Year	Number of fishing households	Pounds usable (net) weight: Removed from commercial harvests	Rod and reel	Other methods	Total	Total without commercial removal	95% confidence range (±%)[a]
1985	228	3,776	31,002	1,752	36,530	32,754	29%
1988	343	18,701	119,873	348	138,922	120,221	62%
1991	272	25,107	25,493	116	50,716	25,609	33%
1992	401	11,383	60,612	0	71,995	60,612	48%
1993	382	3,762	39,556	2,056	45,374	41,612	32%
1997	321	3,551	58,647	4,252	66,450	62,899	41%
Annual average	325	11,047	55,864	1,421	68,331	57,285	

Source Scott et al. 2001.

a. Pertains to estimate of total harvests.

Table 16.–Estimated harvests of halibut for home use, Port Graham.

Year	Number of fishing households	pounds usable (net) weight: Removed from commercial harvests	Rod and reel	Other methods	Total	Total without commercial removal	95% confidence range (±%)[b]
1987	42	1,237	3,809	3,389	8,435	7,198	14%
1989	29	3,217	1,482	1,222	5,921	2,704	47%
1990	32	3,003	4,106	3,171	10,280	7,277	22%
1991	35	1,663	2,332	4,846	8,841	7,178	17%
1992	42	24	7,867	3,365	11,256	11,232	14%
1993	42	86	3,105	1,346	4,537	4,451	14%
1997	36	79	2,881	5,326	8,286	8,207	28%
Annual average[a]	38	1,015	4,017	3,574	8,606	7,591	

Source Scott et al. 2001.

a. Excludes 1989, the year of the *Exxon Valdez* Oil Spill.

b. Pertains to estimate of total harvests.

Table 17.–Estimated harvests of halibut for home use, Kodiak road system.[a]

Year	Number of fishing households	Pounds usable (net) weight: Removed from commercial harvests	Rod and reel	Other methods	Total	Total without commercial removal	95% confidence range (±%)[b]
1982	1,404	NA	NA	NA	451,223	360,113	45%
1991	1,178	48,245	206,692	40,591	295,528	247,283	30%
1992	1,178	89,625	329,345	18,732	437,702	348,077	33%
1993	1,336	142,108	479,391	31,863	653,362	511,254	33%
Annual average	1,306	93,326	338,476	30,395	462,197	366,682	

Source Scott et al. 2001.

a. Harvest data are available based on random samples drawn from the entire road system population for 1982 and 1991. Only Kodiak City was sampled in 1992 and 1993. Estimates for the entire road system population were developed for this table based on the known portion of the total road system harvest harvested by city residents in 1982 and 1991.

b. Pertains to estimate of total harvests.

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Table 18.–Halibut removals in Alaska by regulatory area, 2010.

	Pounds net weight					
Area	Commercial[a]	Sport[b]	Subsistence[c]	Wastage	Bycatch	Total
2C	4,486,000	2,548,000	424,818	251,000	341,000	8,050,818
3A	20,502,000	5,068,000	312,650	1,438,000	2,663,000	29,983,650
3B	10,114,000	40,000	23,009	907,000	1,226,000	12,310,009
4	7,469,000	42,000	46,601	279,000	5,592,000	13,428,601
Alaska	42,571,000	7,698,000	807,077	2,875,000	9,822,000	63,773,077

Sources Williams 2011; Division of Subsistence, ADF&G, SHARC Survey, 2011; IPHC and Geiger 2011.

a. Commercial catch includes IPHC research catch and in Area 2C, the Metlakatla fishery catch.

b. Projected harvests.

c. Includes 9,517 lb of U32 (under 32 inches in length) halibut legally retained by CDQ organizations in areas 4D and 4E for personal use. The subsistence harvest by SHARC holders was 797,560 lb, including 37,084 lb in Area 4.

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Table 19.–Comparison of selected SHARC survey results, 2003–2010.

	Study years								Percent change	
	2003	2004	2005	2006	2007	2008	2009	2010	2010 compared to 2009	2010 compared to previous 7-year average
Response to survey										
Number of SHARCs issued	11,635	13,813	14,306	14,206	15,047	11,565	11,733	10,953	-6.6%	-16.9%
Number of surveys returned	7,593	8,524	8,565	8,426	8,682	7,316	6,944	6,670	-3.9%	-16.7%
Response rate	65.3%	61.7%	59.9%	59.3%	57.7%	63.3%	59.2%	60.9%	2.9%	0.0%
Subsistence halibut fishing										
Estimated number of subsistence halibut fishers	4,942	5,984	5,621	5,909	5,933	5,303	5,296	4,991	-5.8%	-10.4%
Percent of all SHARC holders subsistence fishing	42.5%	43.3%	39.3%	41.6%	39.4%	45.9%	45.1%	45.6%	0.9%	7.4%
Estimated number of subsistence halibut	43,926	52,412	55,875	54,089	53,697	48,604	45,434	43,332	-4.6%	-14.3%
Estimated net pounds of subsistence halibut	1,041,330	1,193,162	1,178,222	1,125,312	1,032,293	886,988	861,359	797,560	-7.4%	-23.7%
Average weight of subsistence-harvested halibut	23.7	22.8	21.1	20.8	19.2	18.2	19.0	18.4	-2.9%	-11.0%
Average harvest per fisher, fish	8.9	8.8	9.9	9.2	9.1	9.2	8.6	8.7	1.2%	-4.3%
Average harvest per fisher, net pounds	210.7	199.4	209.6	190.4	174.0	167.3	162.6	159.8	-1.7%	-14.9%
Sport halibut fishing by SHARC holders										
Estimated number of sport halibut fishers	2,580	3,107	3,147	2,894	2,566	2,609	2,528	2,297	-9.1%	-17.2%
Percent of all SHARC holders sport fishing	22.2%	22.5%	22.0%	20.4%	17.1%	22.6%	21.5%	21.0%	-2.6%	-0.9%
Estimated number of sport halibut	10,784	12,530	14,096	11,219	10,959	11,427	9,938	8,651	-13.0%	-25.2%
Estimated net pounds of sport halibut	245,947	251,092	293,415	223,639	196,198	197,760	165,318	149,241	-9.7%	-33.6%
Average weight of sport-harvested halibut	22.8	20.0	20.8	19.9	17.9	17.3	16.6	17.3	3.7%	-10.8%
Average harvest per fisher, fish	4.2	4.0	4.5	3.9	4.3	4.4	3.9	3.8	-4.2%	-9.6%
Average harvest per fisher, net pounds	95.3	80.8	93.2	77.3	76.5	75.8	65.4	65.0	-0.7%	-19.4%
Total number of halibut fishers										
Estimated number of fishers, subsistence or sport	5,941	6,980	6,876	6,899	6,787	6,202	6,153	5,835	-5.2%	-10.9%
Percent of total SHARC holders who fished	51.1%	50.5%	48.1%	48.6%	45.1%	53.6%	52.4%	53.3%	1.6%	6.7%
Incidental rockfish harvests										
Number of rockfish harvesters	1,239	1,616	1,544	1,529	1,568	1,404	1,427	1,322	-7.4%	-10.4%
Percent of all SHARC holders	10.6%	11.7%	10.8%	10.8%	10.4%	12.1%	12.2%	12.1%	-0.8%	7.5%
Percent of all subsistence halibut fishers	25.1%	27.0%	27.5%	25.9%	26.4%	26.5%	27.0%	26.5%	-1.7%	0.1%
Number of rockfish harvested	14,870	19,001	12,395	16,945	15,266	14,346	13,315	12,851	-3.5%	-15.2%
Average number of rockfish harvested, all subsistence halibut fishers	3.0	3.2	2.2	2.9	2.6	2.7	2.5	2.6	2.4%	-5.4%
Average number of rockfish harvested, subsistence halibut fishers who harvested rockfish	12.0	11.8	8.0	11.1	9.7	10.2	9.3	9.7	4.2%	-5.7%

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Table 19.–Page 2 of 2.

	Study years								Percent change	
	2003	2004	2005	2006	2007	2008	2009	2010	2010 compared to 2009	2010 compared to previous 7-year average
Incidental lingcod harvests										
Number of lingcod harvesters	699	953	862	927	959	854	900	732	-18.7%	-16.8%
Percent of all SHARC holders	6.0%	6.9%	6.0%	6.5%	6.4%	7.4%	7.7%	6.7%	-12.9%	-0.3%
Percent of all subsistence halibut fishers	14.1%	15.9%	15.3%	15.7%	16.2%	16.1%	17.0%	14.7%	-13.7%	-7.0%
Number of lingcod harvested	3,298	4,407	2,355	3,486	3,402	3,479	3,390	2,864	-15.5%	-15.8%
Average number of lingcod harvested, all subsistence halibut fishers	0.7	0.7	0.4	0.6	0.6	0.7	0.6	0.6	-10.4%	-6.2%
Average number of lingcod harvested, subsistence halibut fishers who harvested lingcod	4.7	4.6	2.7	3.8	3.5	4.1	3.8	3.9	3.9%	0.7%

Sources Fall et al. 2004, 2005, 2006, 2007; Fall and Koster 2008, 2009, 2010; ADF&G Division of Subsistence, SHARC Survey, 2011.

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Table 20.–Percentage of SHARCs that expired by SHARC type.

	Percentage of SHARCs					
	Tribal		Rural		All	
	Expired	Active	Expired	Active	Expired	Active
Never responded to harvest survey	29.0%	18.4%	25.0%	12.4%	27.1%	14.5%
Never subsistence fished for halibut	40.8%	21.3%	24.9%	8.1%	32.9%	12.6%
Never harvested halibut	5.3%	10.4%	8.3%	12.2%	6.8%	11.6%
Harvest: low (1 to 100 lb)	11.7%	22.4%	19.0%	28.0%	15.3%	26.1%
Harvest: medium (101 to 1,000 lb)	12.4%	25.6%	22.1%	38.2%	17.2%	33.9%
Harvest: high (>1,000 lb)	0.8%	1.8%	0.8%	1.1%	0.8%	1.3%
All harvesters (any amount)	24.9%	49.8%	41.9%	67.3%	33.3%	61.3%
All fishers (includes never harvested)	30.2%	60.2%	50.2%	79.5%	40.1%	72.9%

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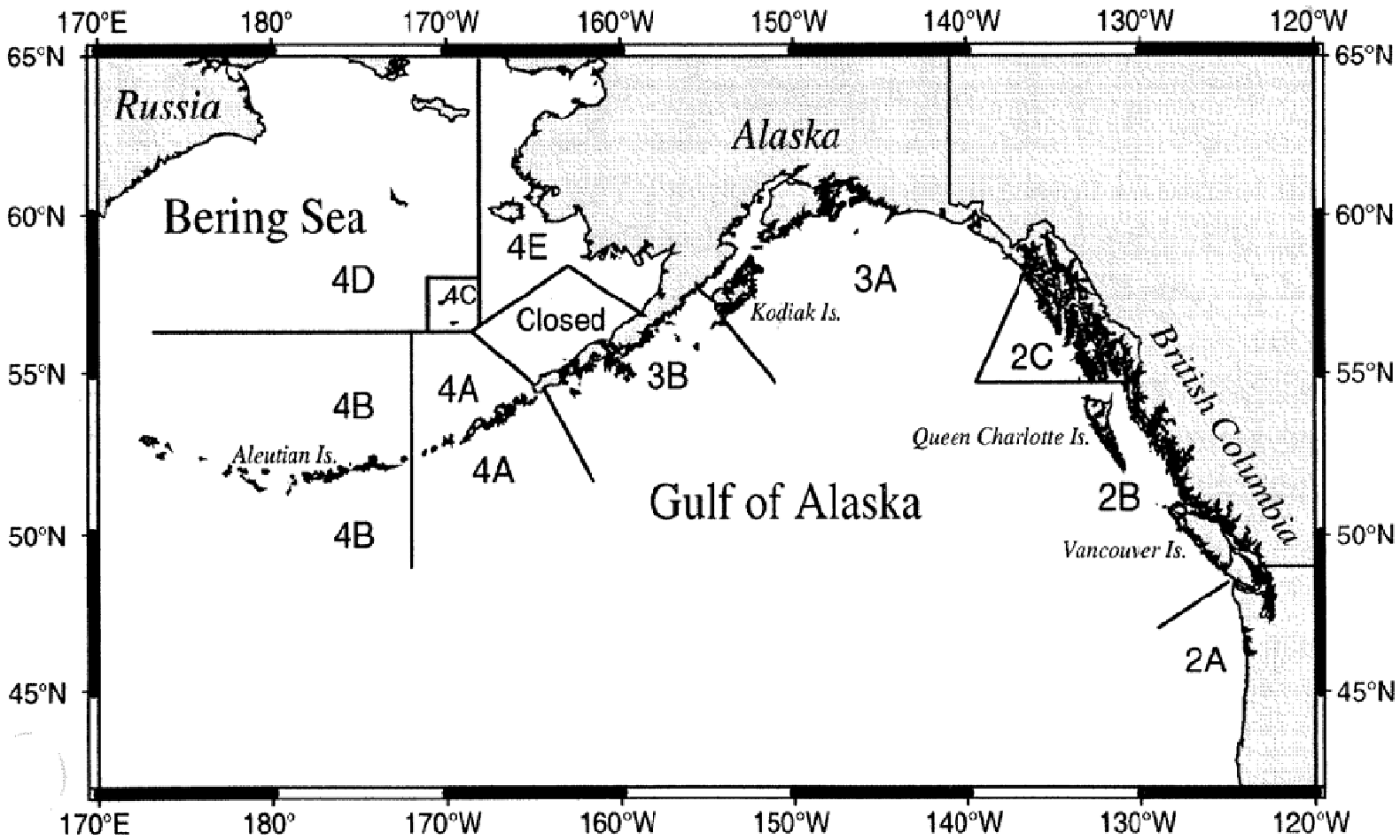

Figure 1. Regulatory areas for the Pacific halibut fishery.

Figure 1.–Regulatory areas for the Pacific halibut fishery.

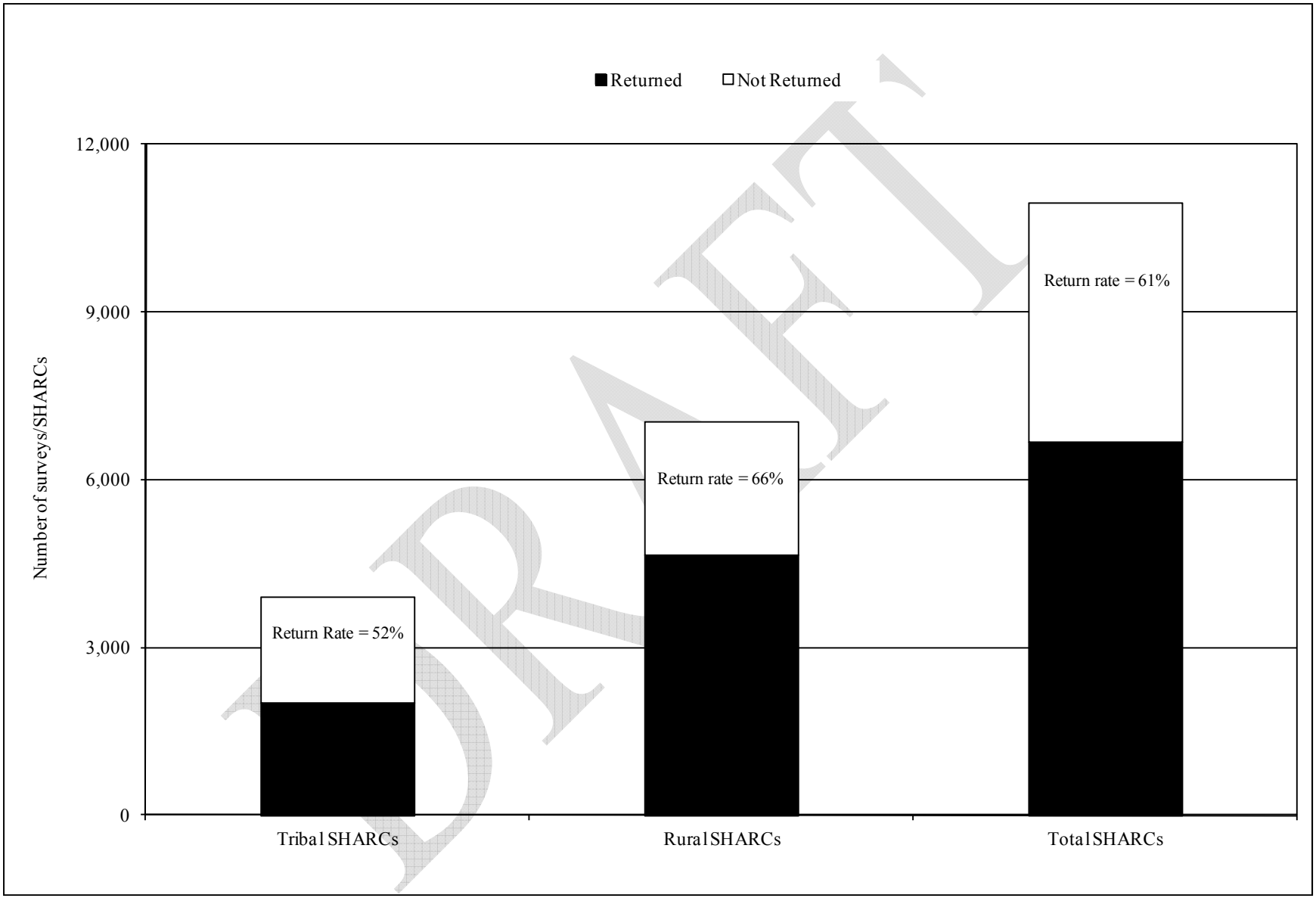

Figure 2.–Number of surveys returned and return rates for subsistence halibut surveys, by SHARC type, 2010.

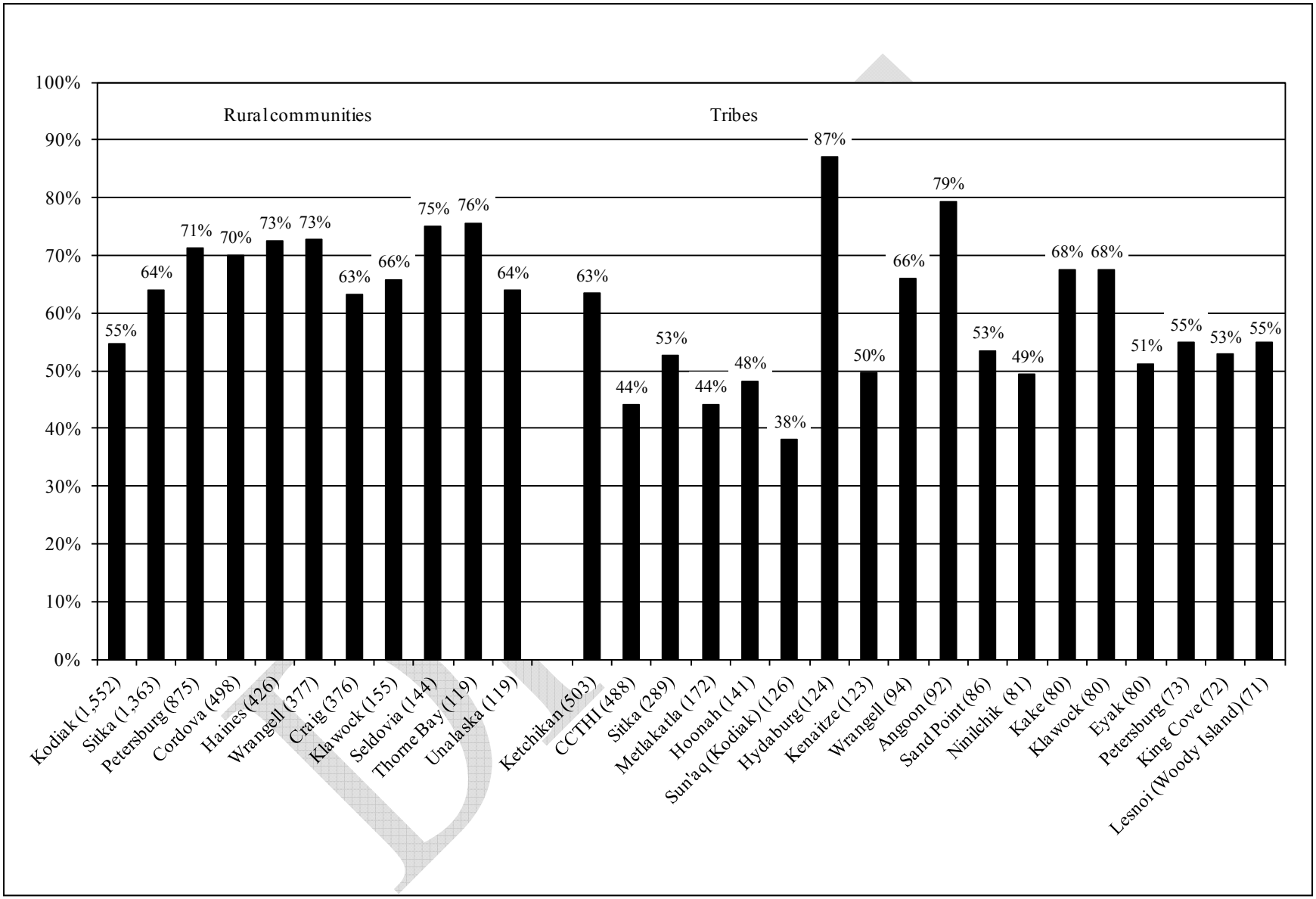

Figure 3.– SHARC survey return rates, communities with more than 100 SHARCs issued and tribes with more than 70 SHARCs issued, 2010.

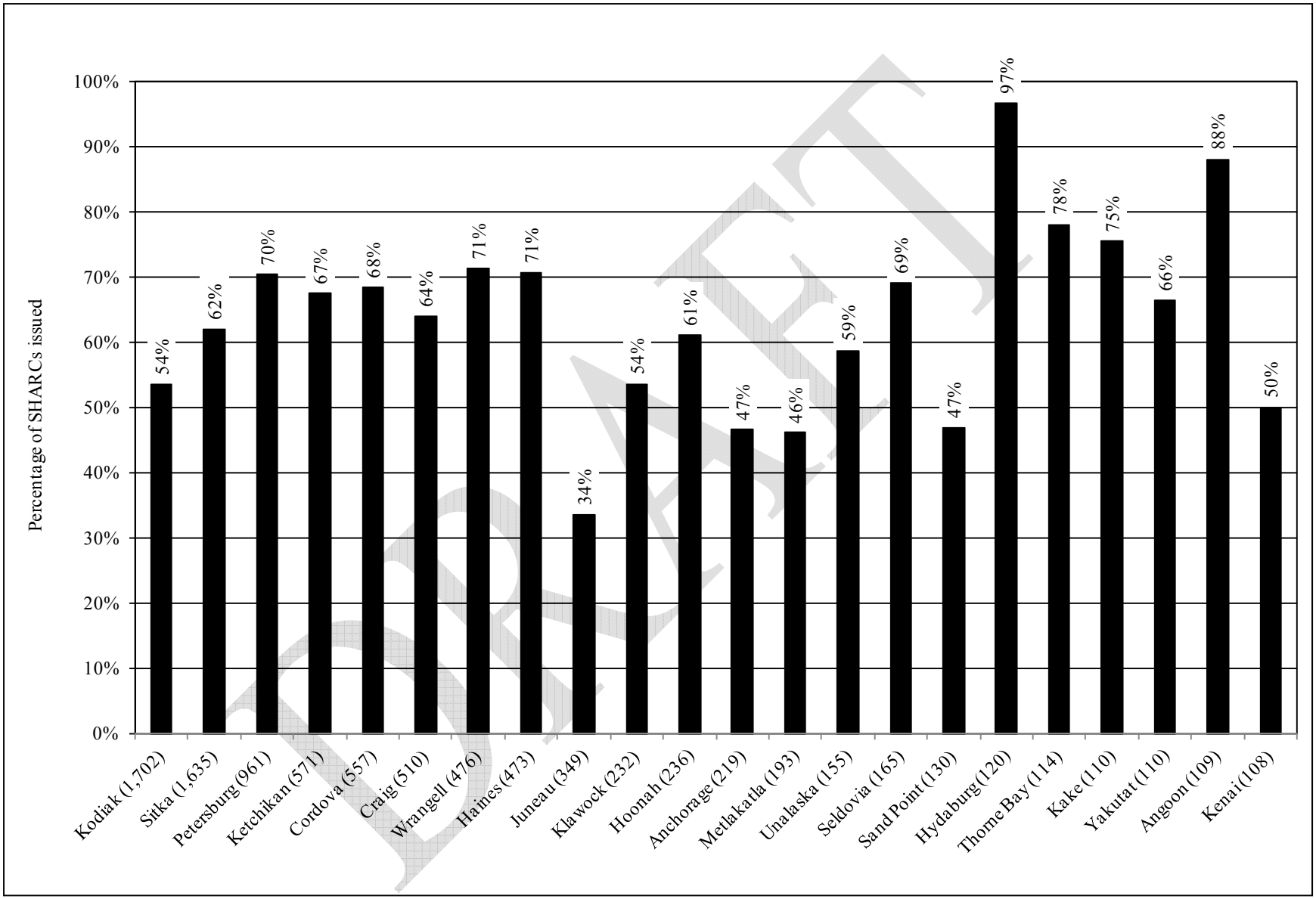

Figure 4.–Return rate by place of residence, 2010.

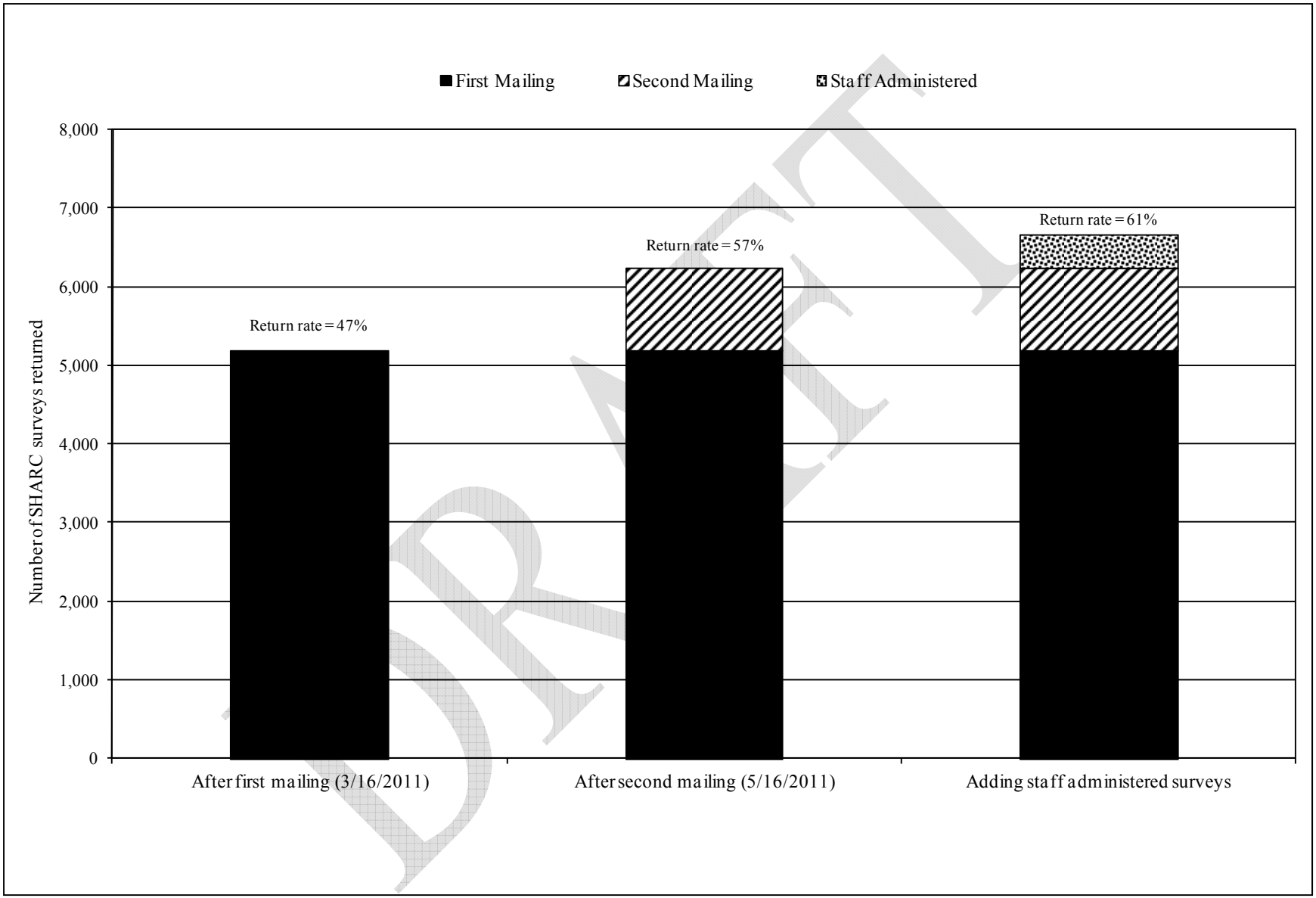

Figure 5.–Number of survey responses by response category, 2010.

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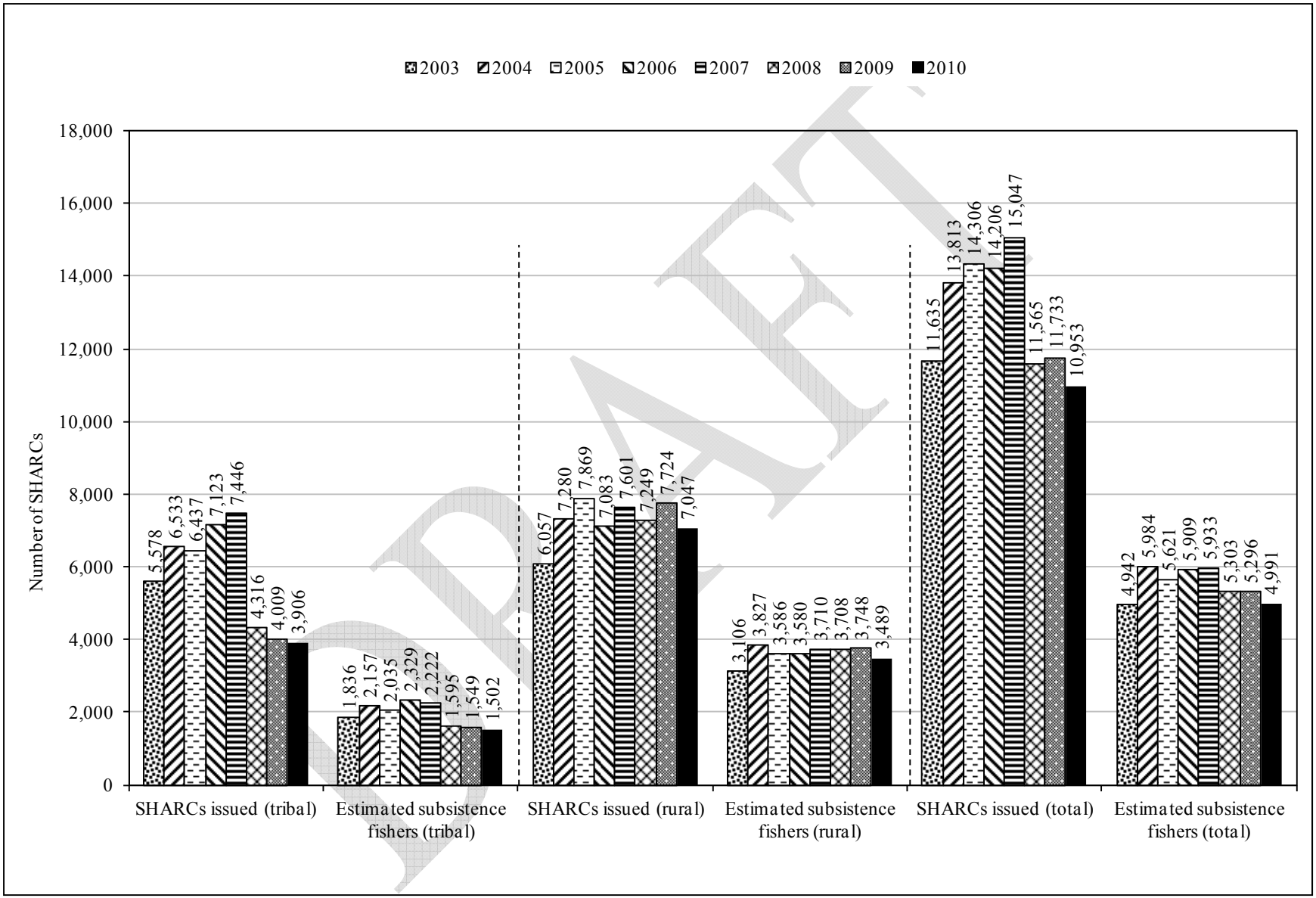

Figure 6.–Number of SHARCs issued and estimated number of subsistence halibut fishers by SHARC type, 2003–2010.

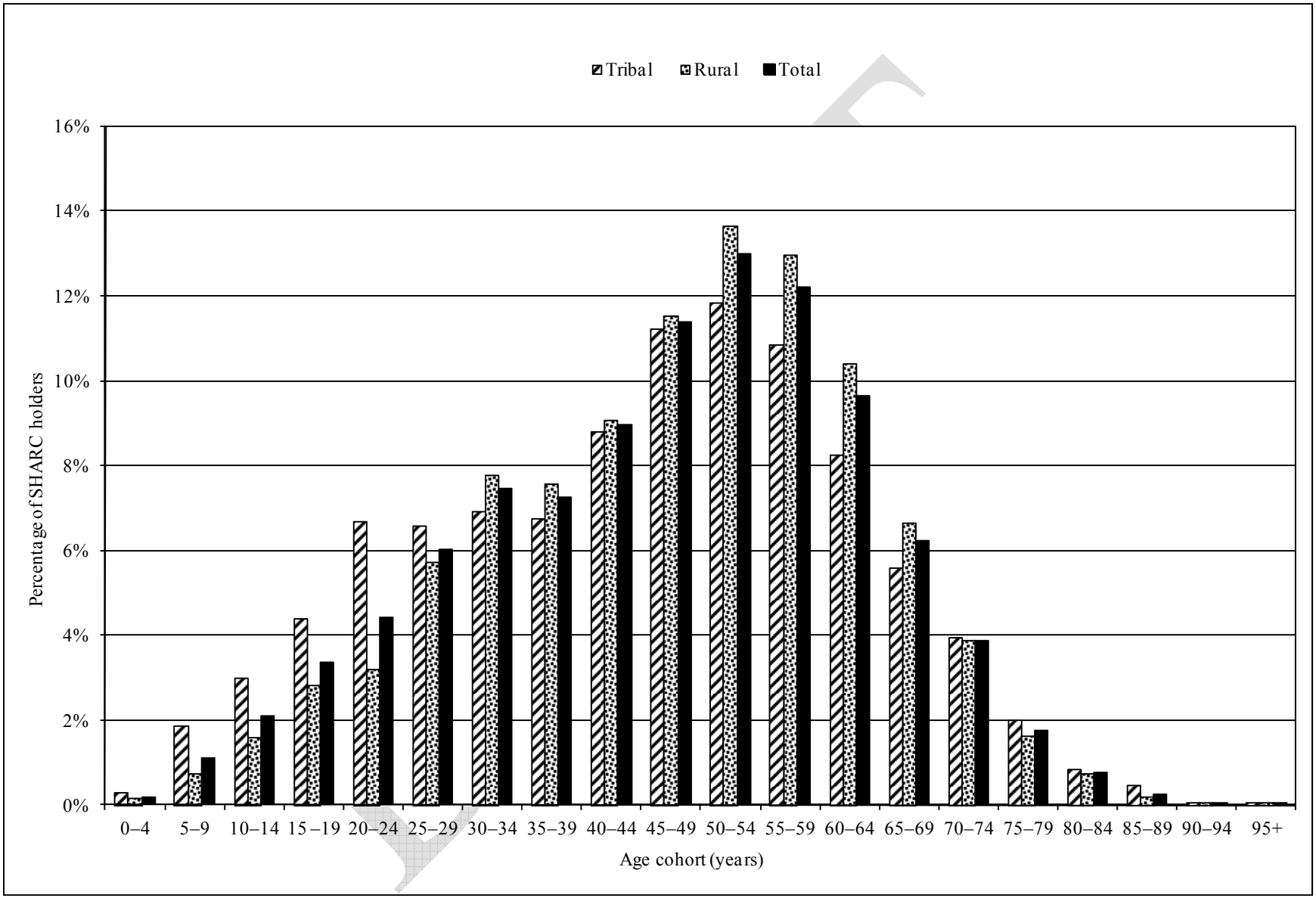

Figure 7.–Age of subsistence halibut registration certificate holders by SHARC type, 2010.

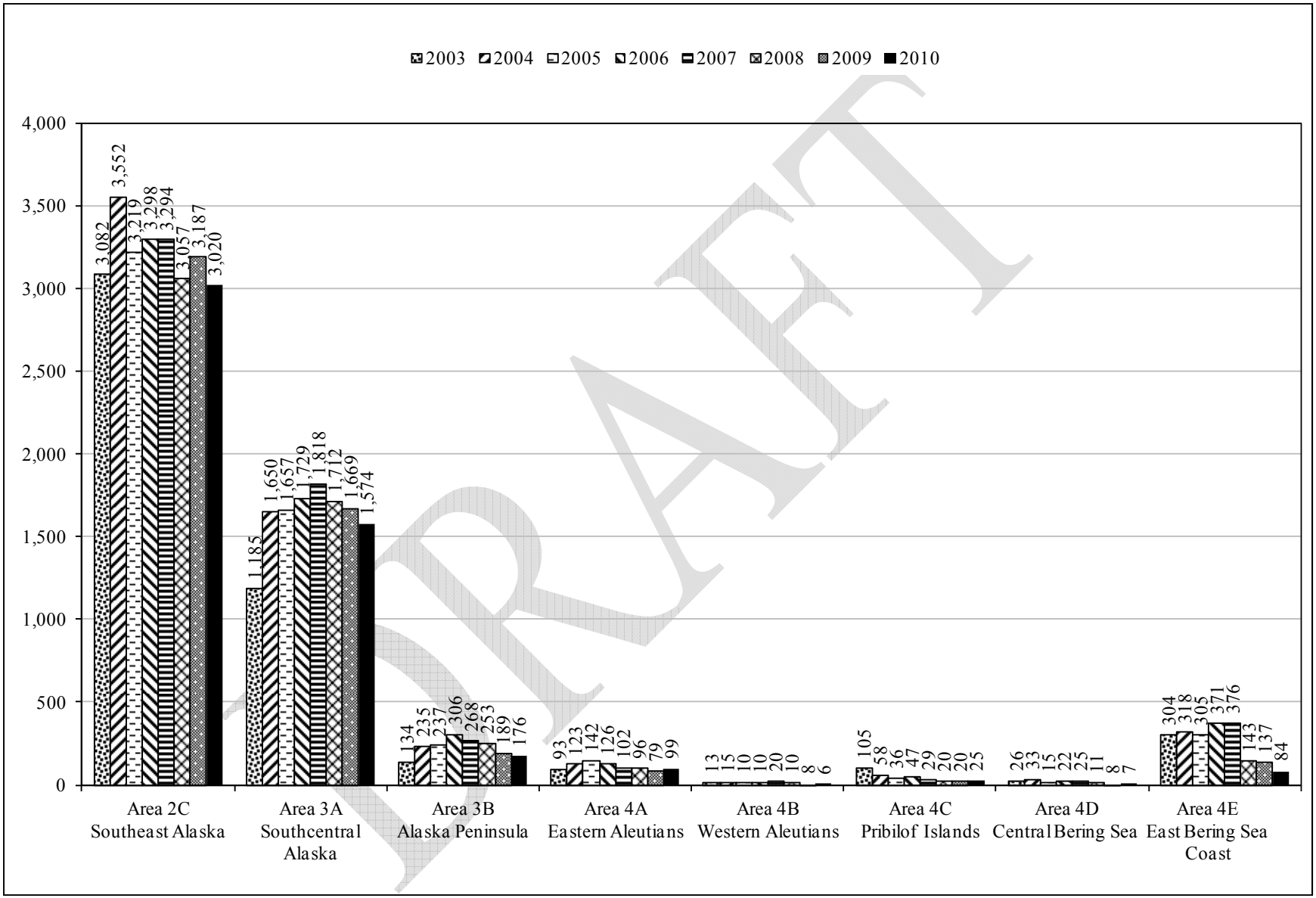

Figure 8.–Estimated number of Alaska subsistence halibut fishers, 2003–2010 by regulatory area of tribe or rural community.

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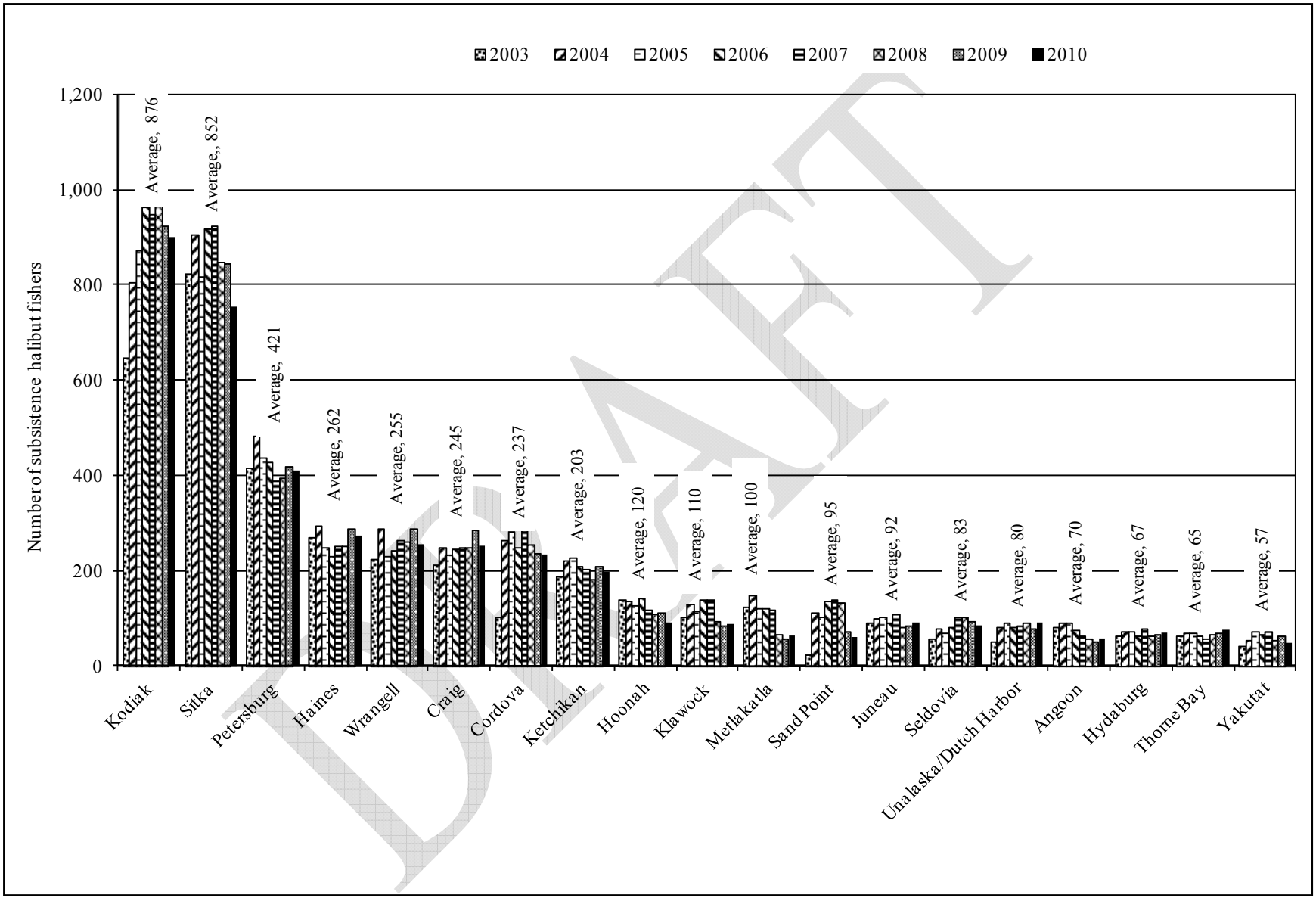

Figure 9.–Estimated number of subsistence halibut fishers by place of residence, 2003–2010, communities with 50 or more fishers in 2010.

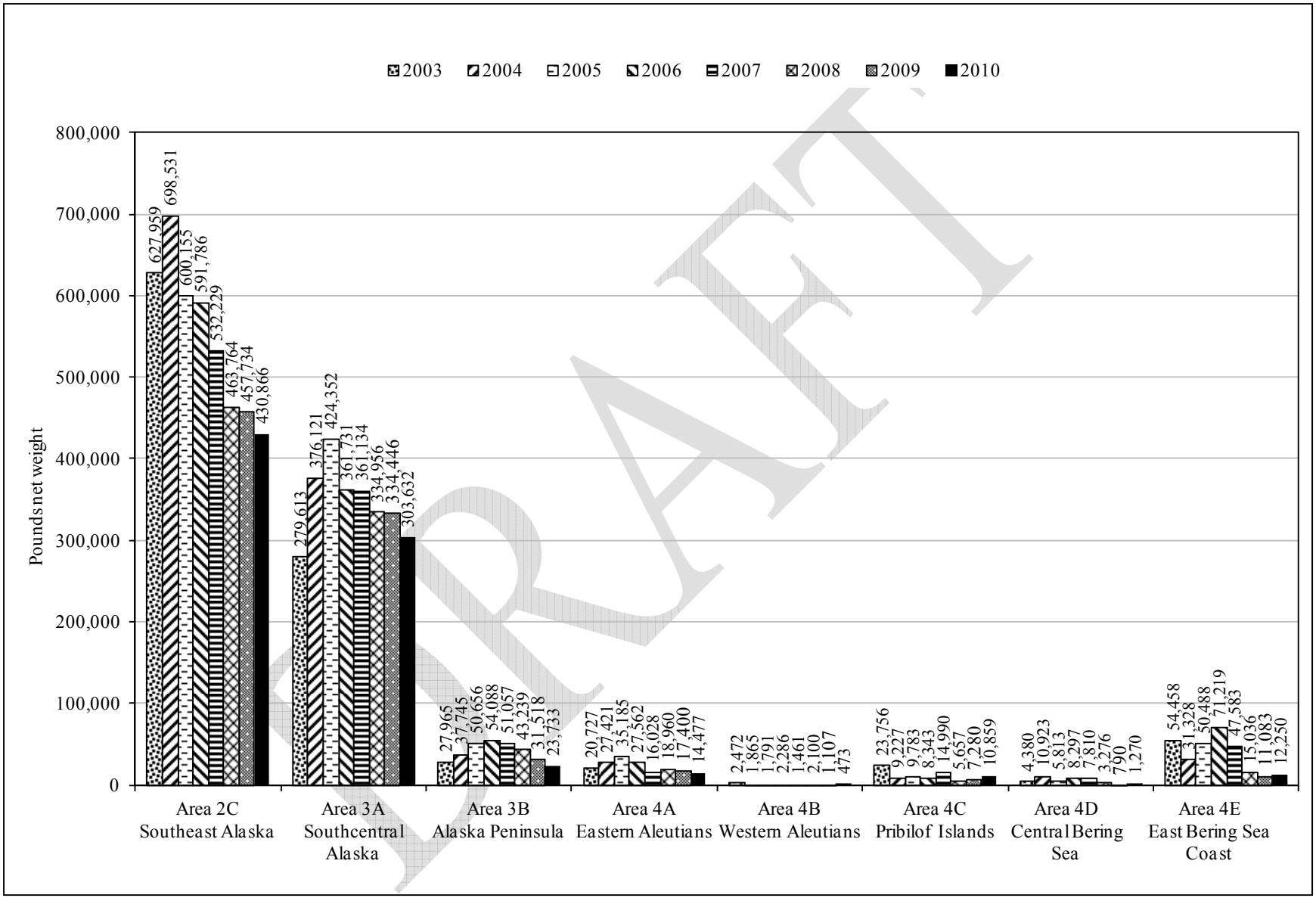

Figure 10.–Estimated subsistence halibut harvests, pounds net weight, by regulatory area of tribe and rural community, 2003–2010.

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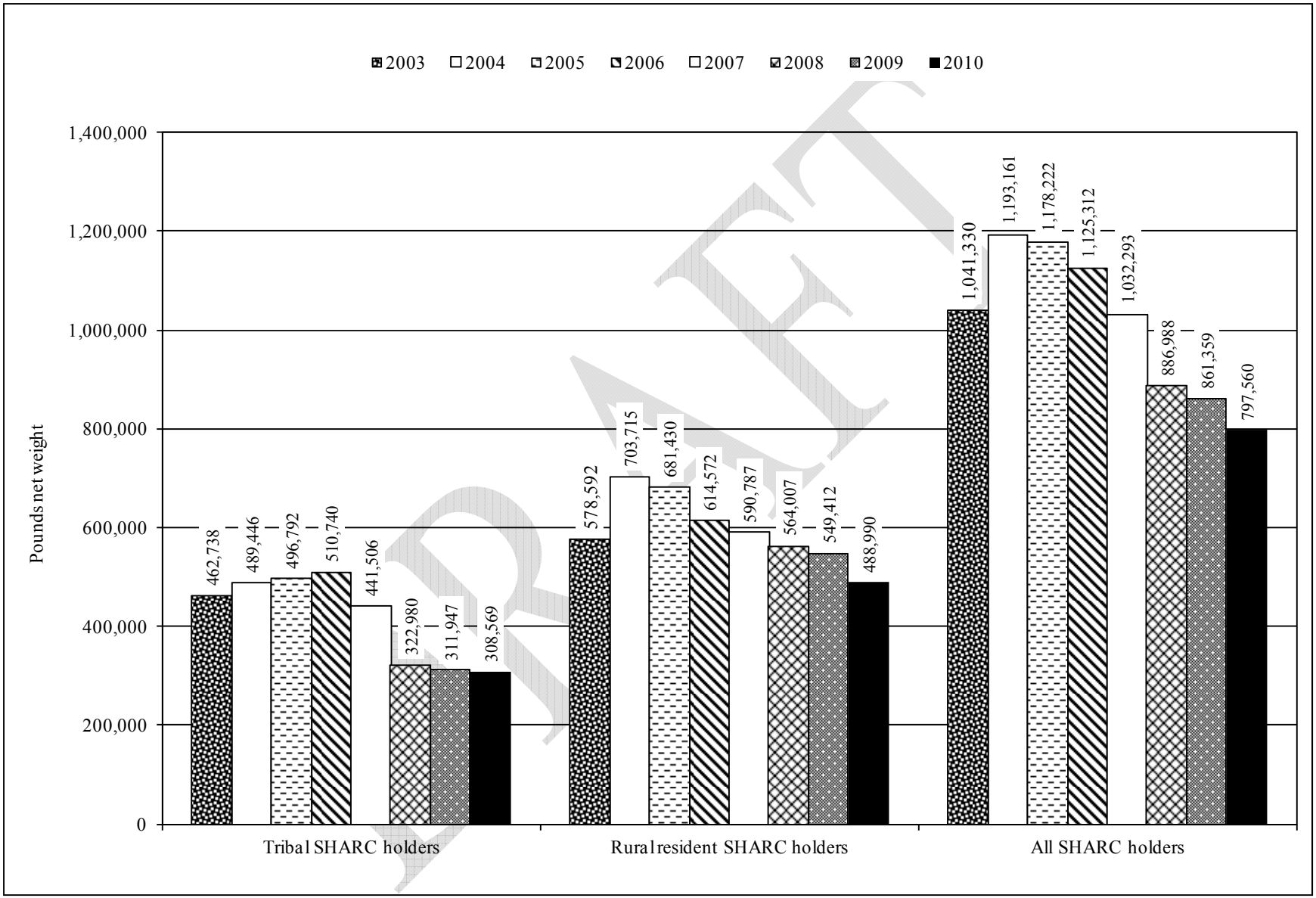

Figure 11.–Estimated Alaska subsistence halibut harvests in pounds net weight by SHARC type, 2003–2010.

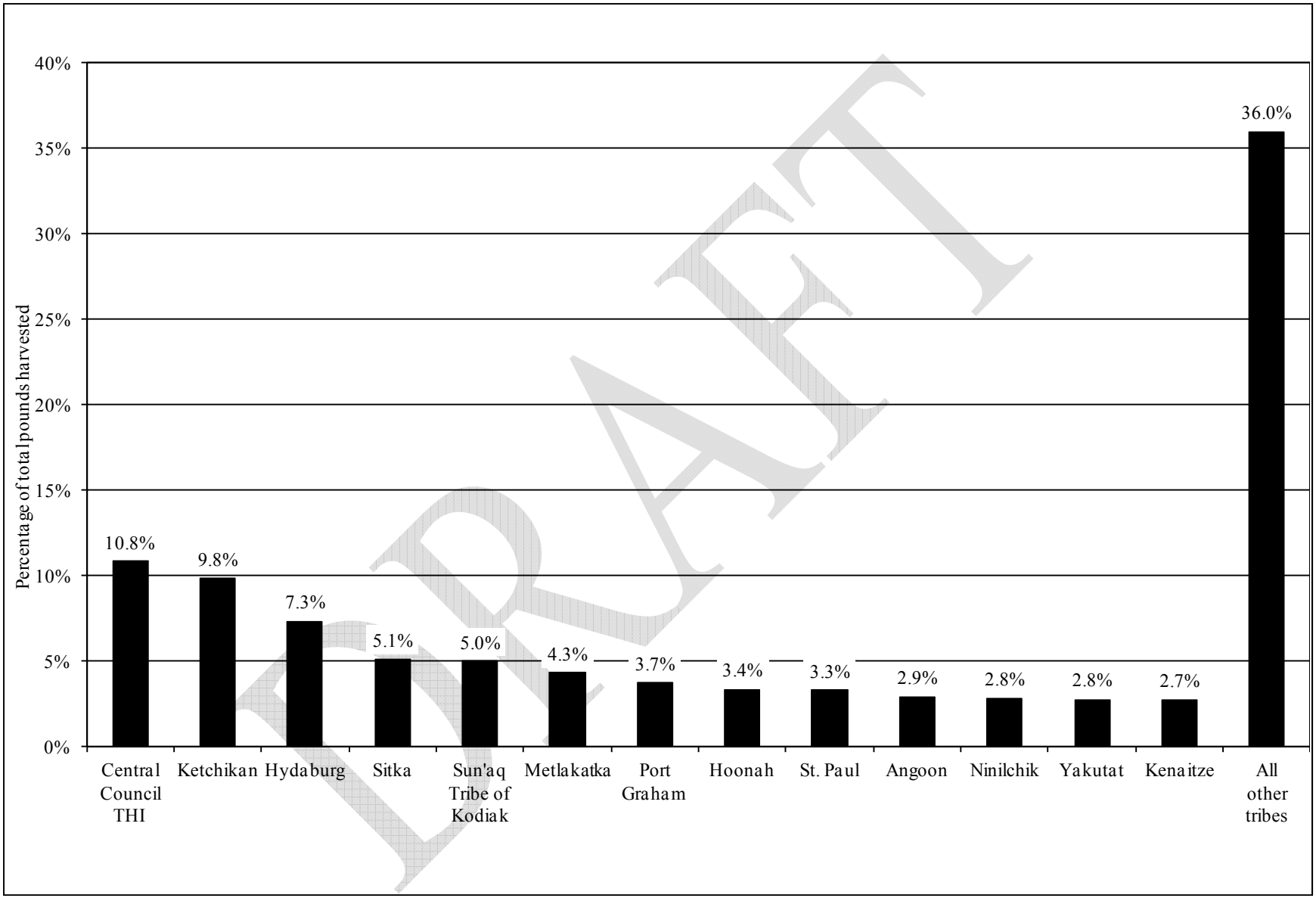

Figure 12.–Percentage of tribal subsistence halibut harvest by tribe, 2010.

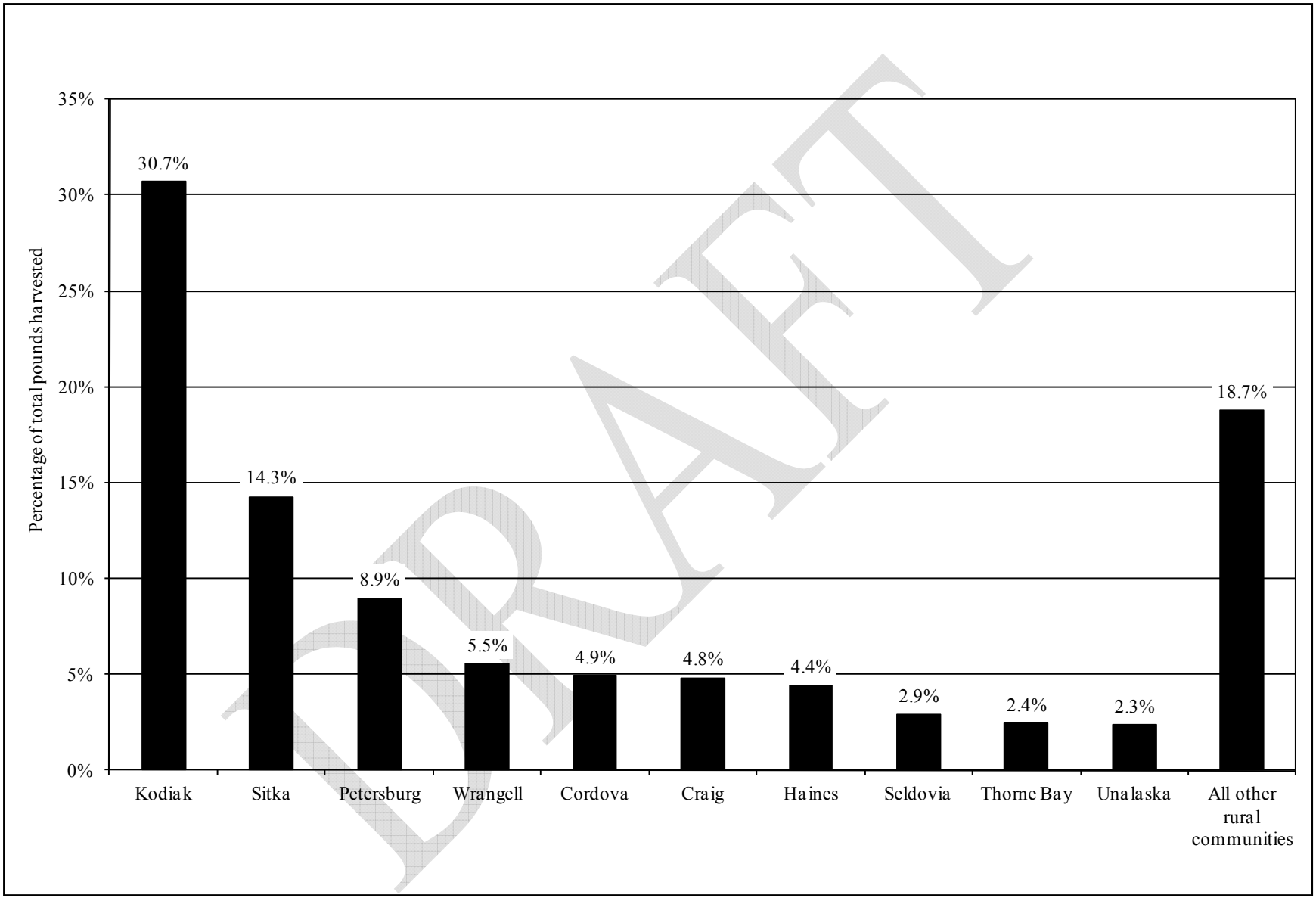

Figure 13.–Percentage of rural community subsistence halibut harvest by community, 2010.

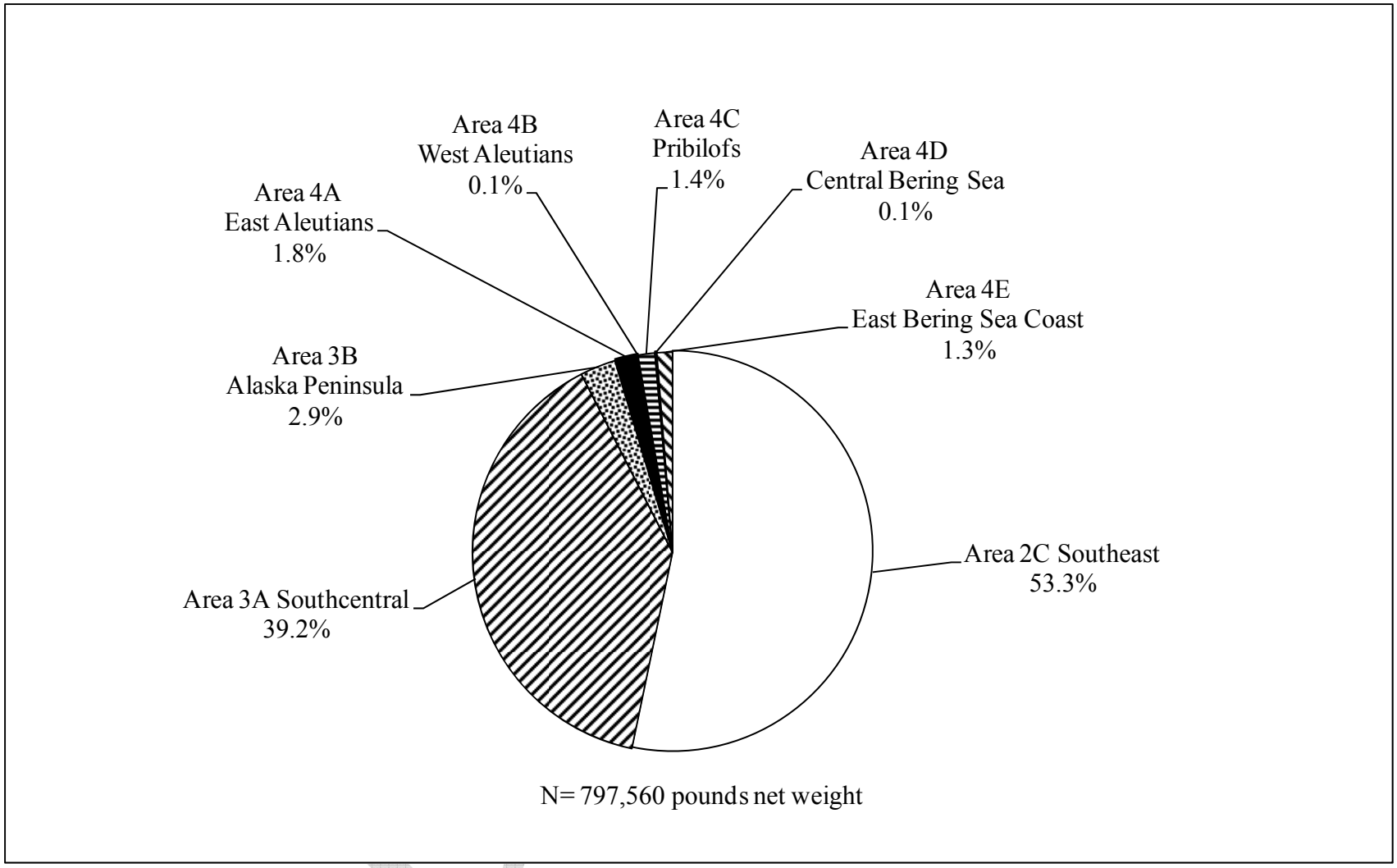

Figure 14.–Percentage of subsistence halibut harvest by regulatory area fished, 2010.

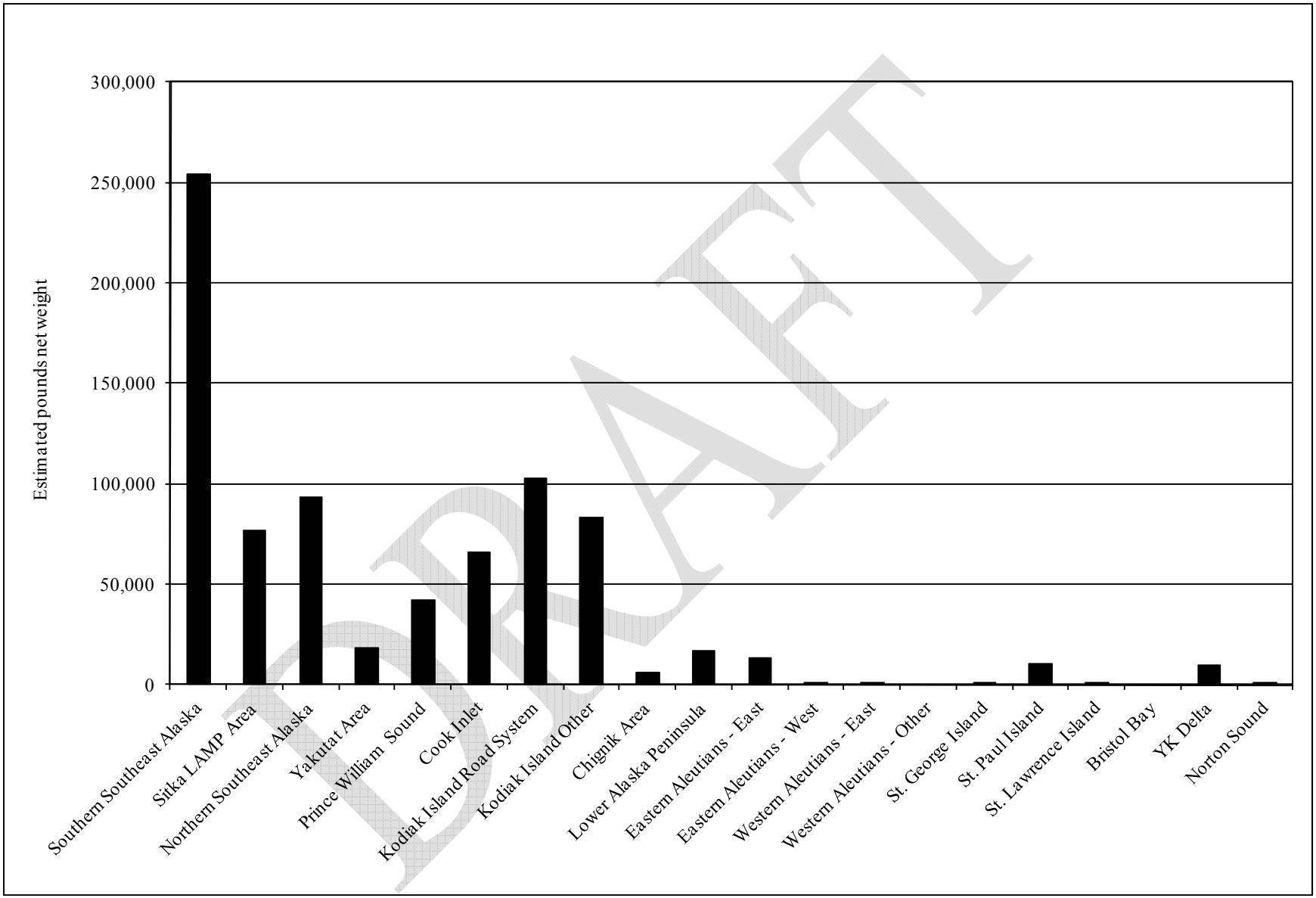

Figure 15.–Alaska subsistence halibut harvests by geographic area, 2010.

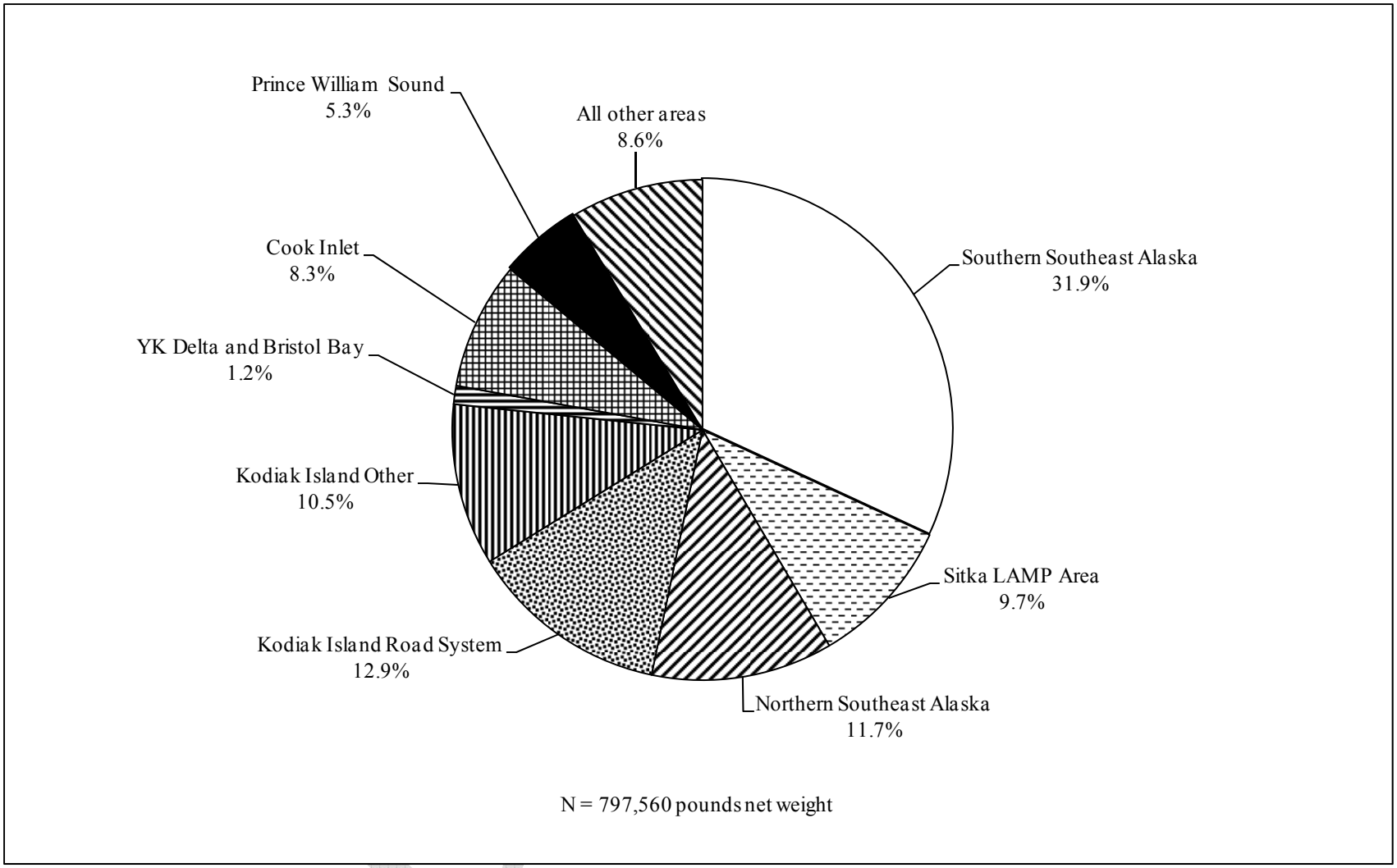

Figure 16.–Percentage of Alaska subsistence halibut harvest by geographic area, 2010.

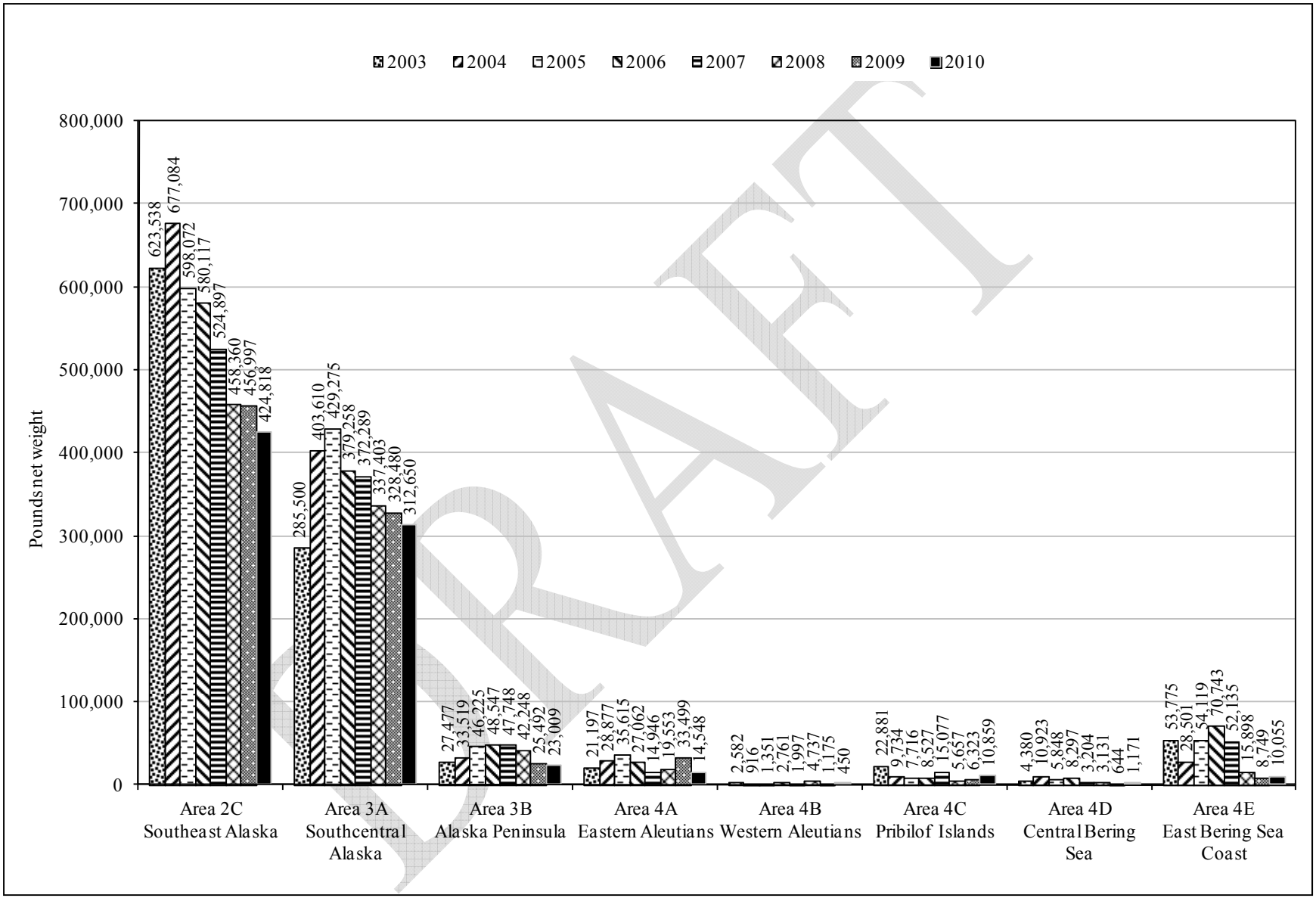

Figure 17.–Estimated subsistence halibut harvests, pounds net weight, by regulatory area fished, 2003–2010.

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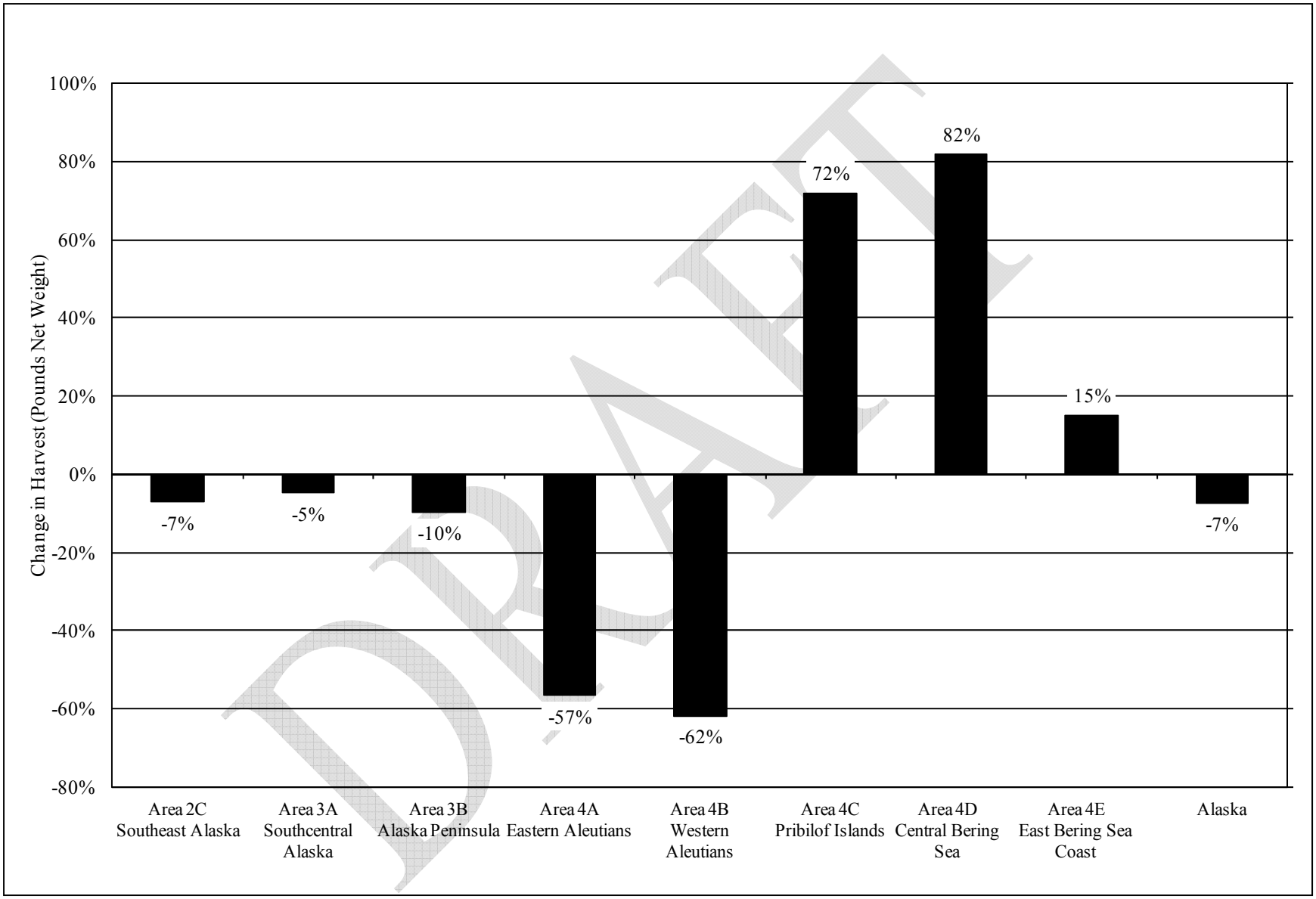

Figure 18.–Change in Alaska subsistence halibut harvests from 2009 through 2010 by regulatory area fished.

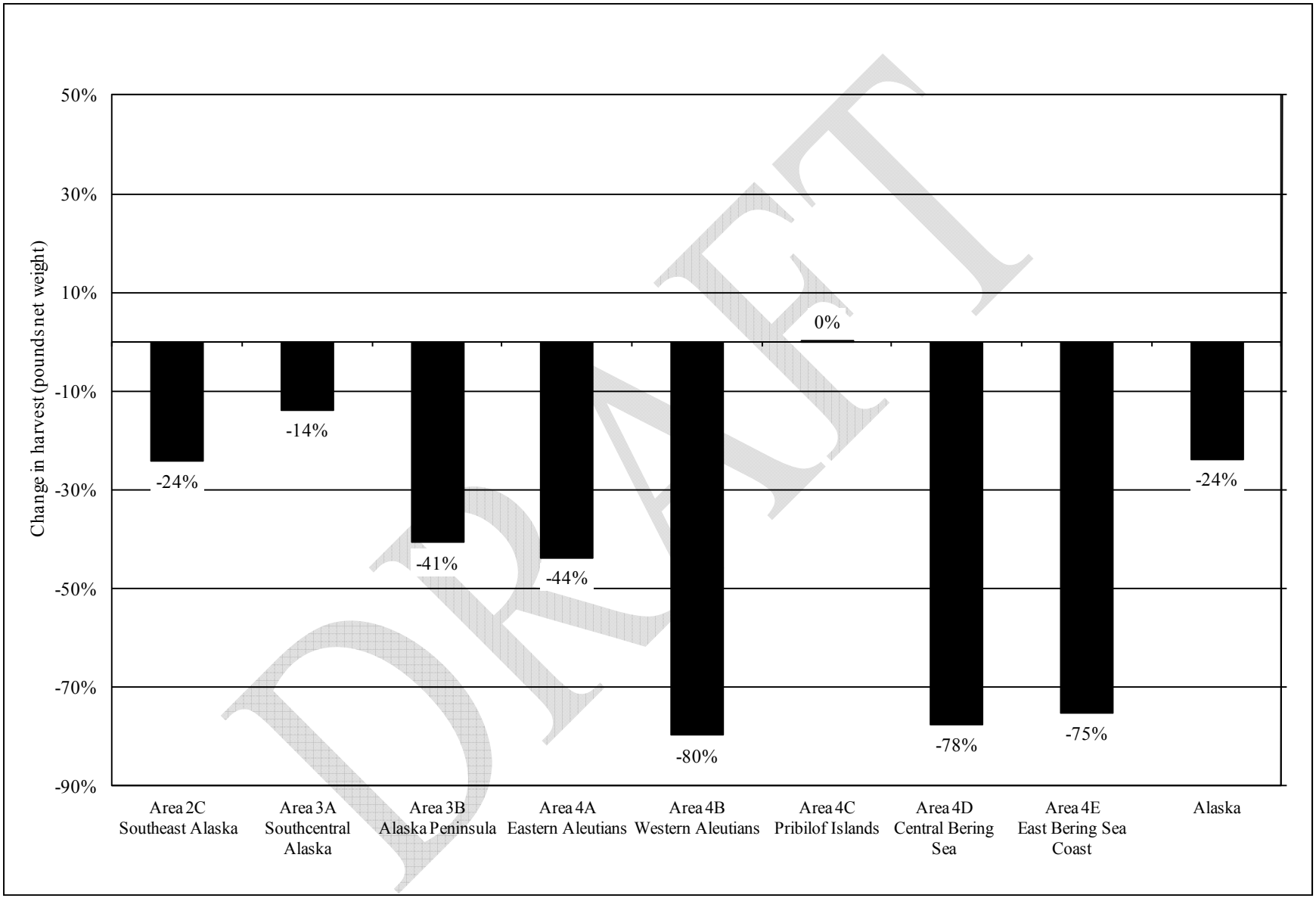

Figure 19.–Change in Alaska subsistence halibut harvests in 2010 compared to recent 7-year average (2003–2009) by regulatory area fished.

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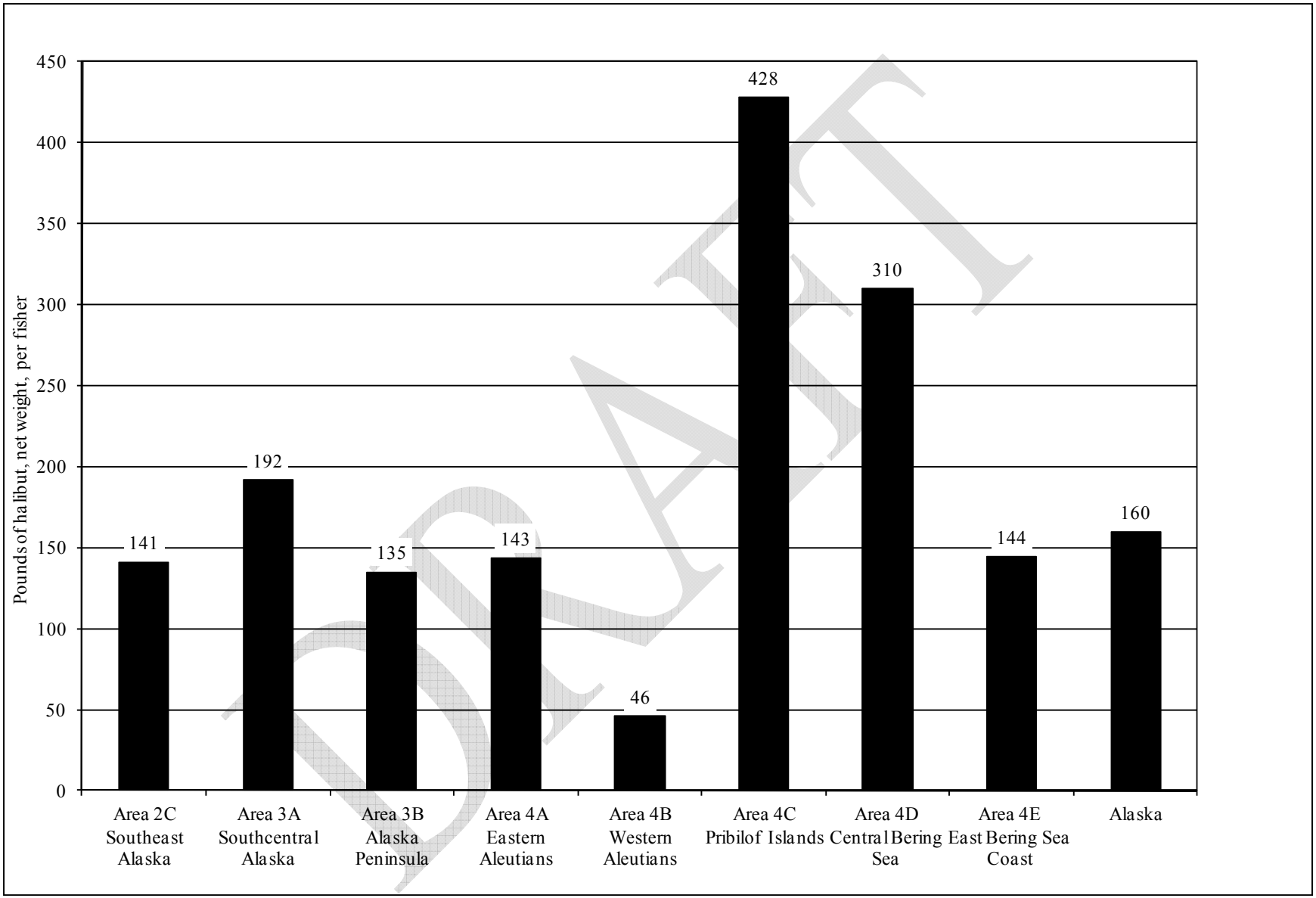

Figure 20.–Average subsistence harvest of halibut per fisher in Alaska, 2010, by regulatory area, in pounds net weight.

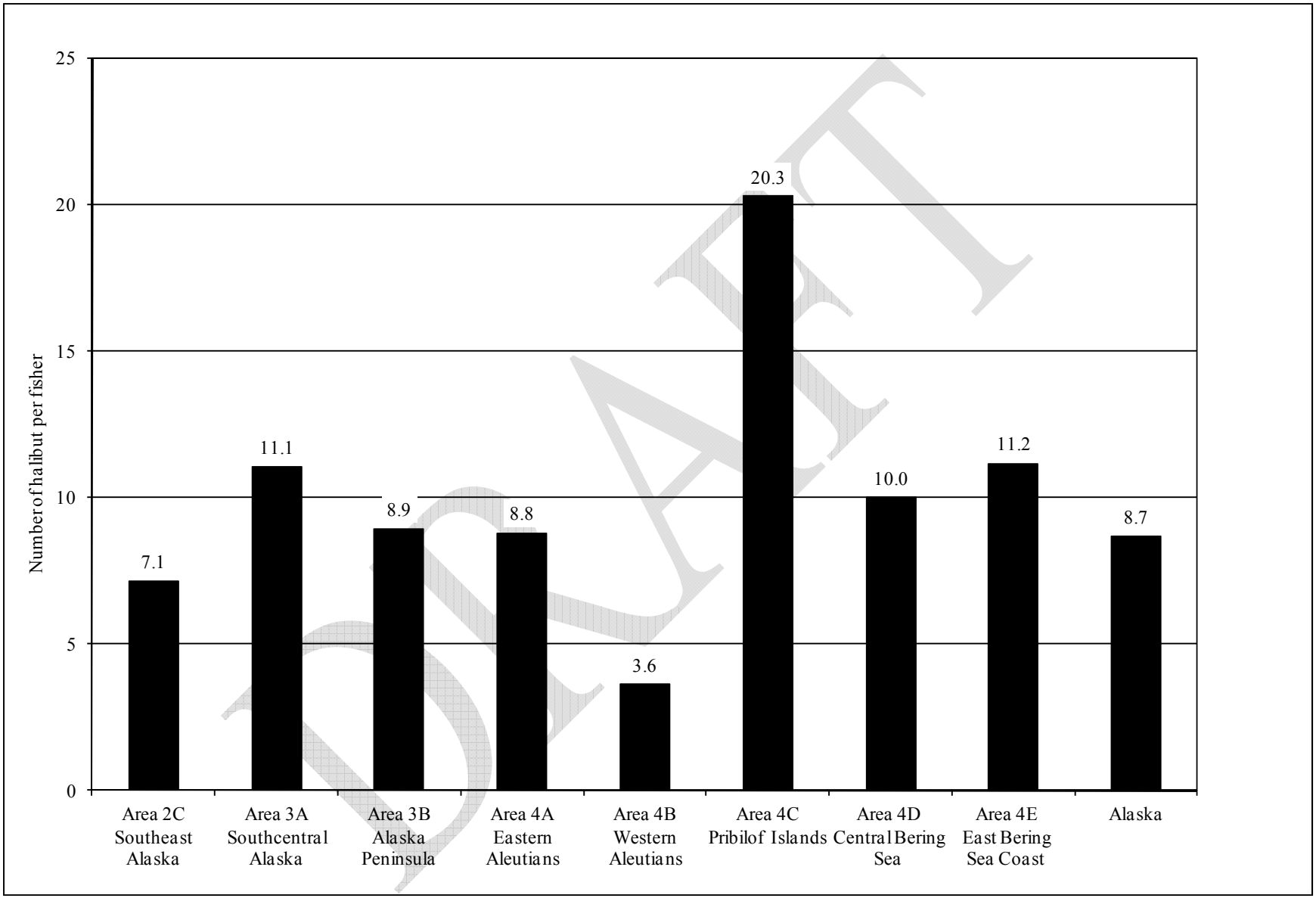

Figure 21.–Average subsistence harvest of halibut per fisher in Alaska, 2010, by regulatory area, in number of fish.

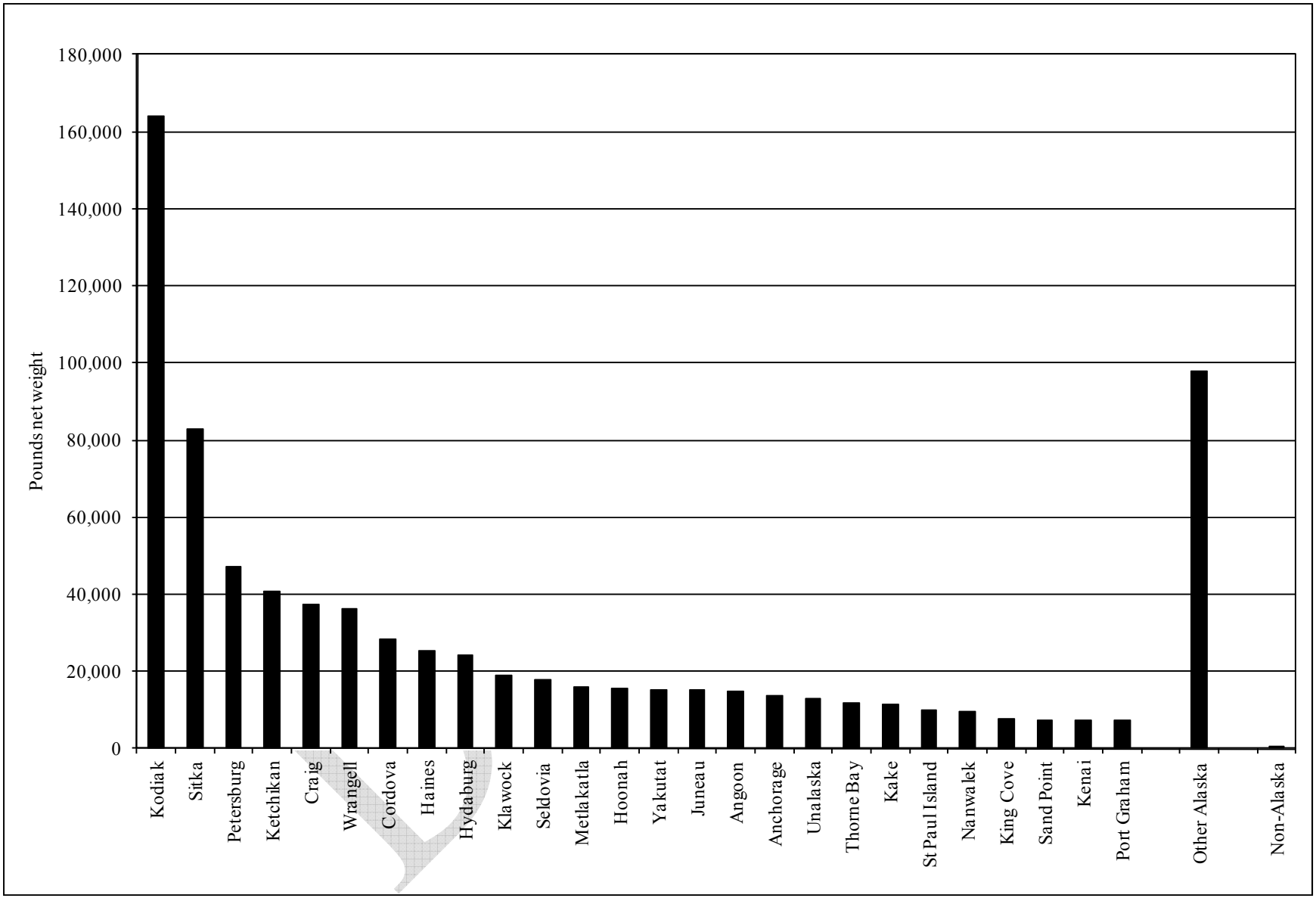

Figure 22.–Alaska subsistence halibut harvests by place of residence, 2010.

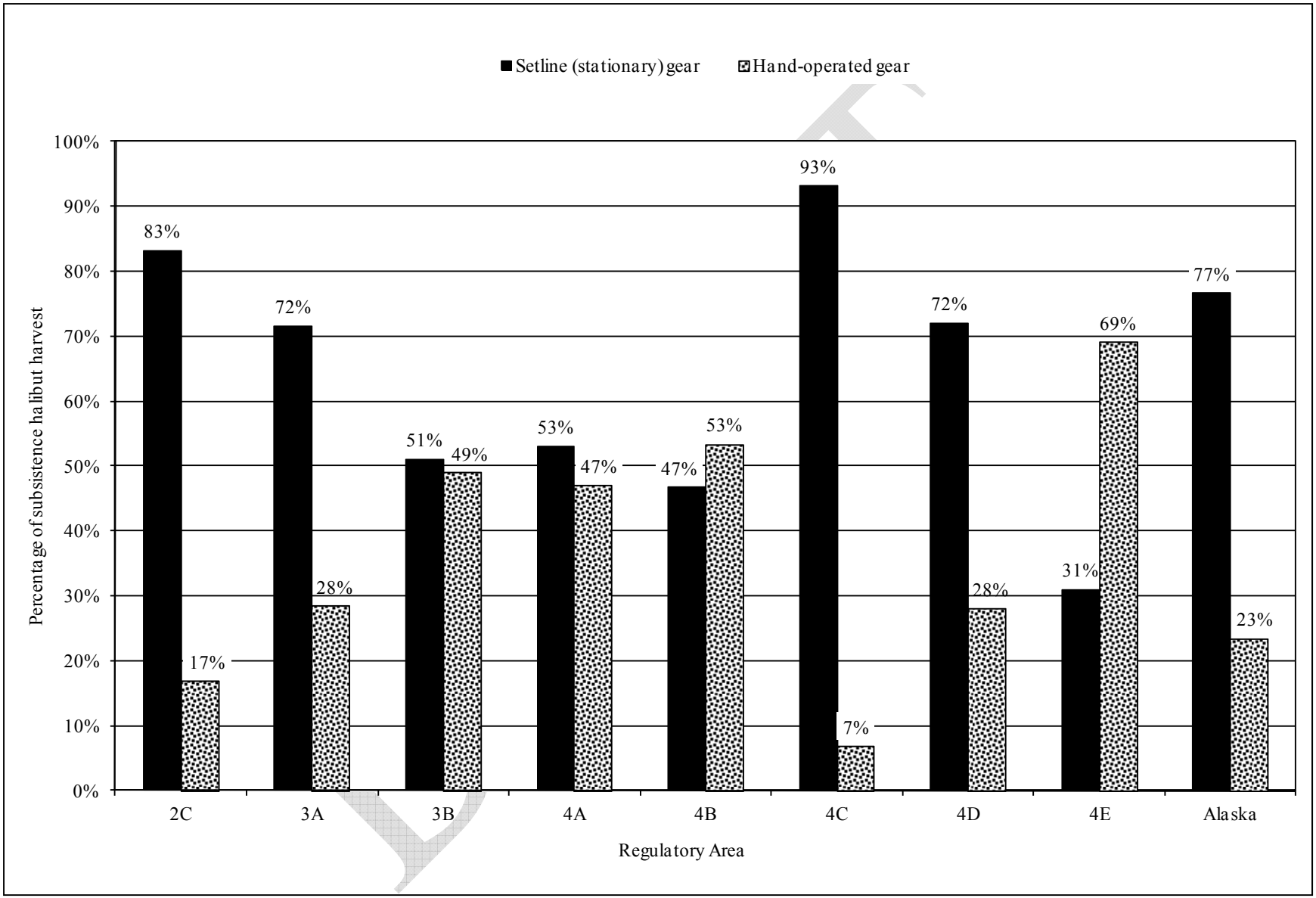

Figure 23.–Percentage of subsistence halibut harvest by gear type by regulatory area, 2010.

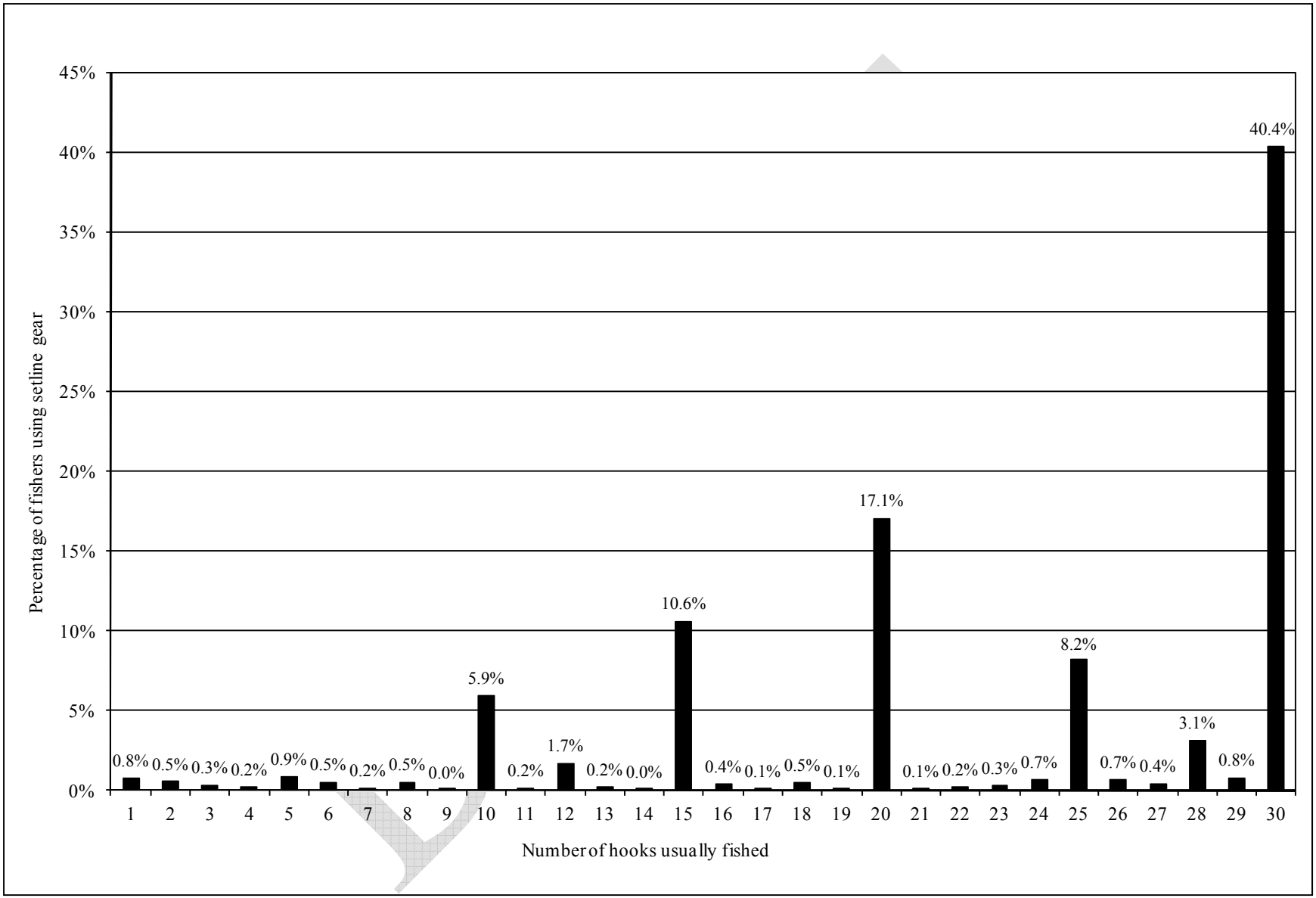

Figure 24.–Number of hooks usually fished, percentage of fishers using setline (stationary) gear, Alaska subsistence halibut fishery, 2010.

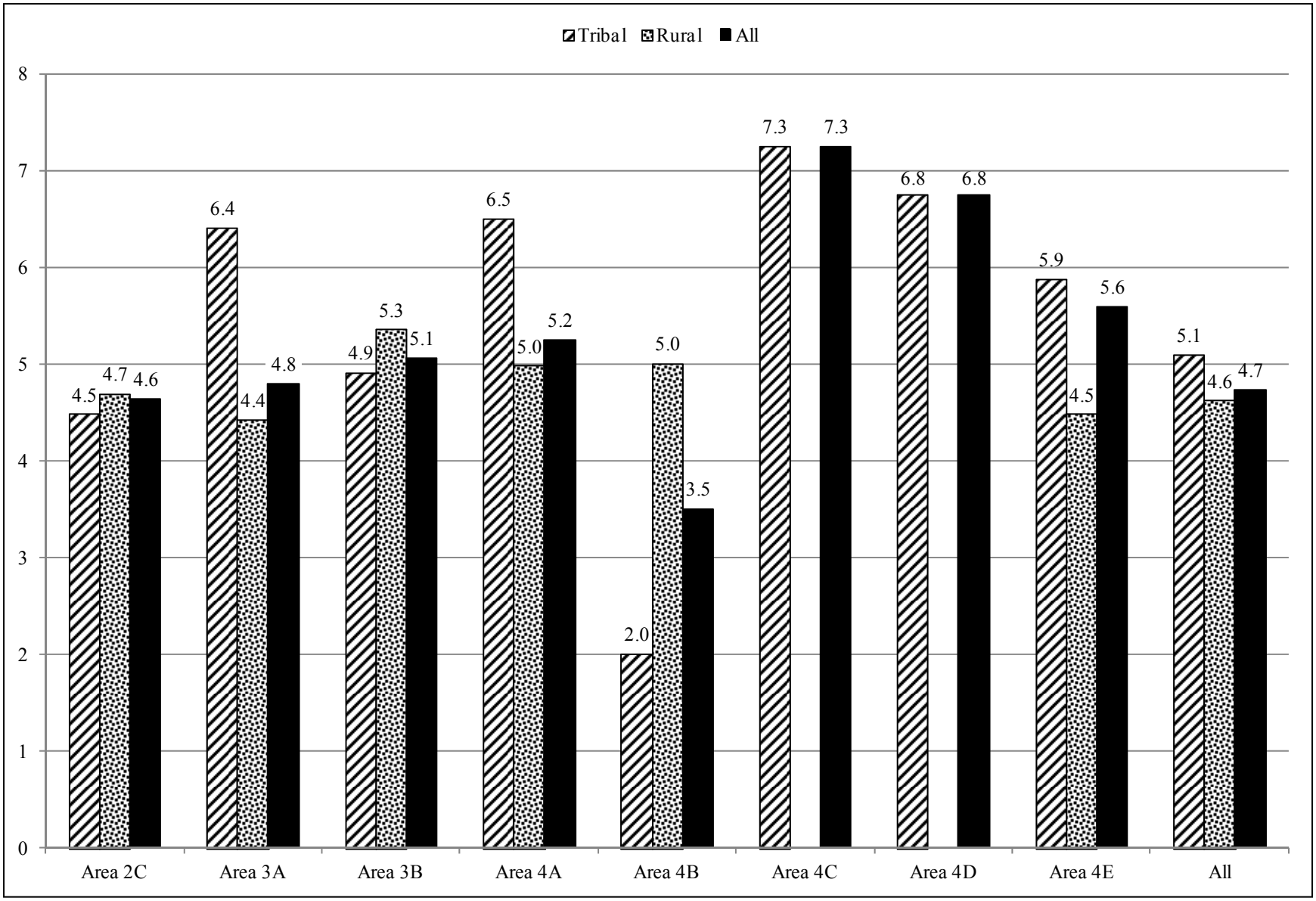

Figure 25.–Average number of subsistence fishing trips for halibut by regulatory area and SHARC type, 2010.

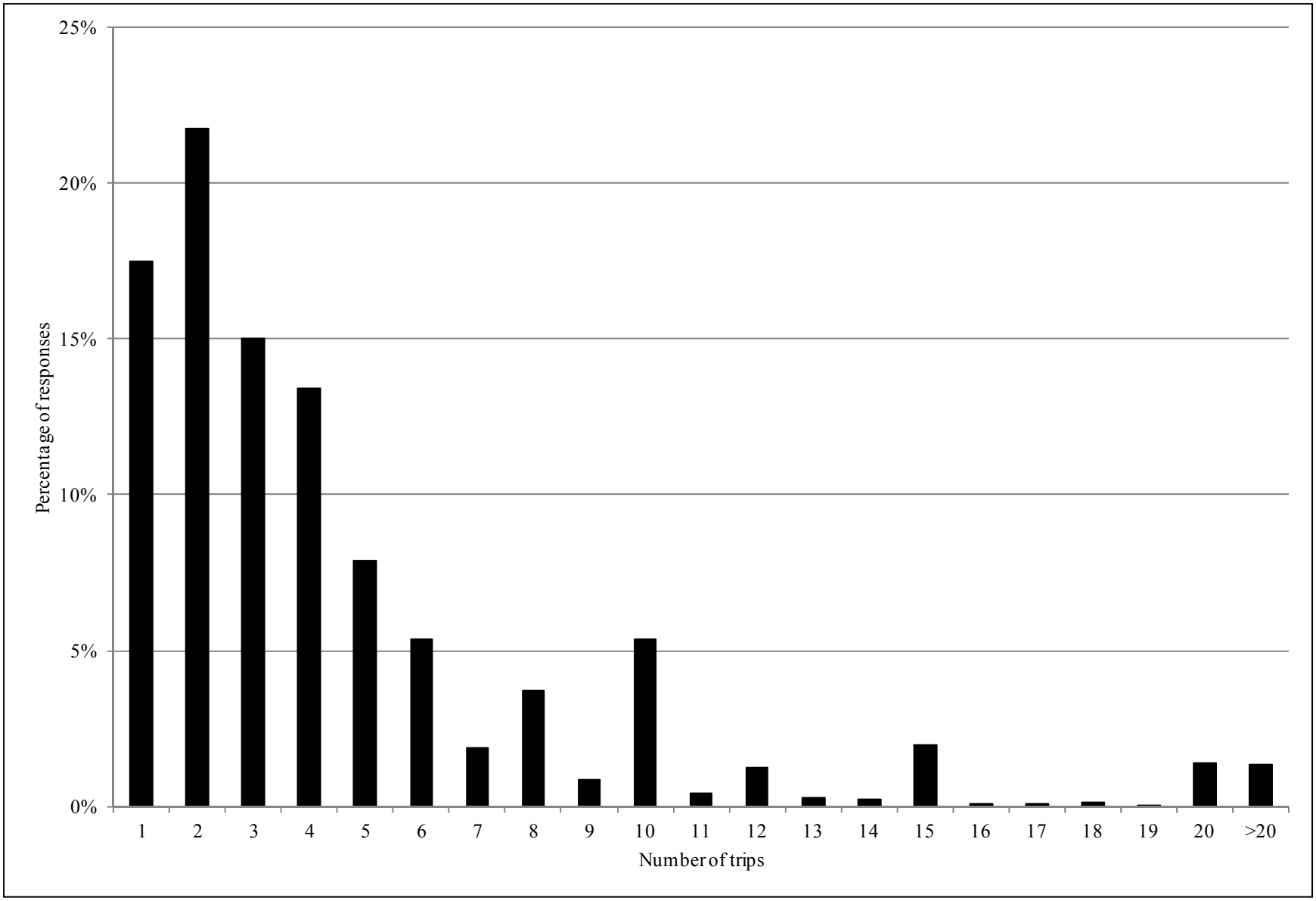

Figure 26.–Number of subsistence fishing trips for halibut, 2010.

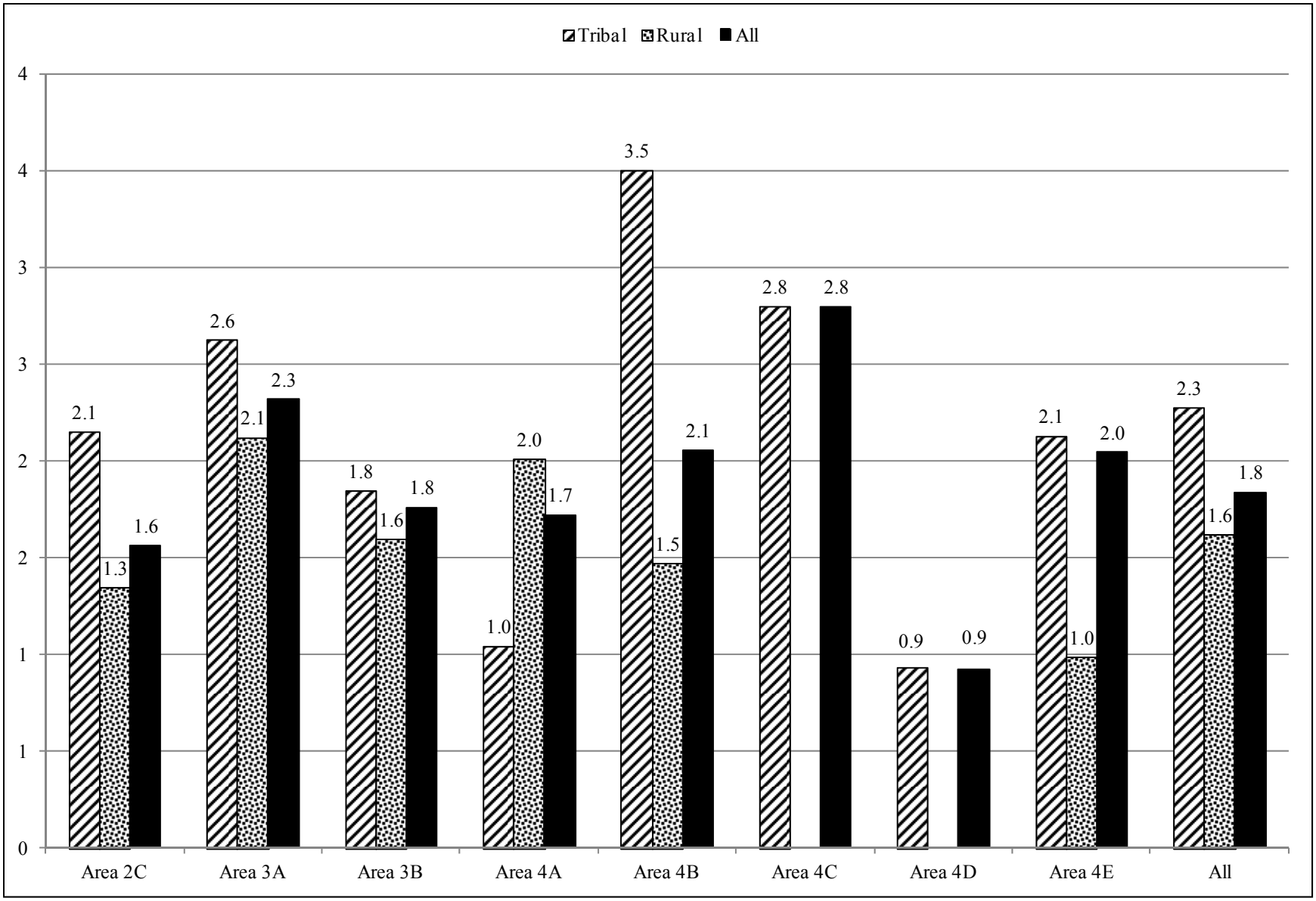

Figure 27.–Average number of halibut harvested per subsistence fishing trip by regulatory area and SHARC type, 2010.

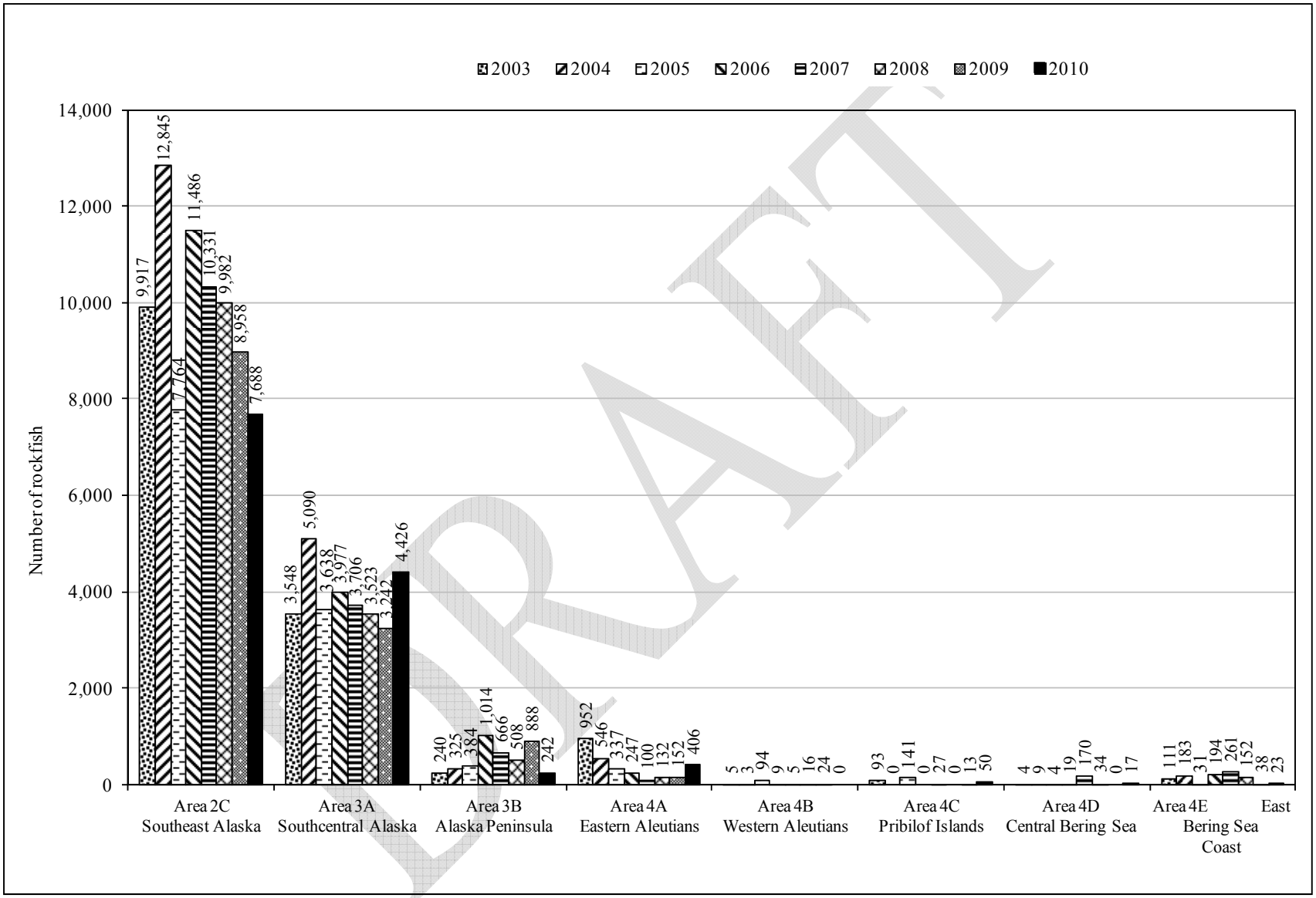

Figure 28.–Estimated incidental harvests of rockfish in the Alaska subsistence halibut fishery, number of fish, by regulatory area fished, 2003–2010.

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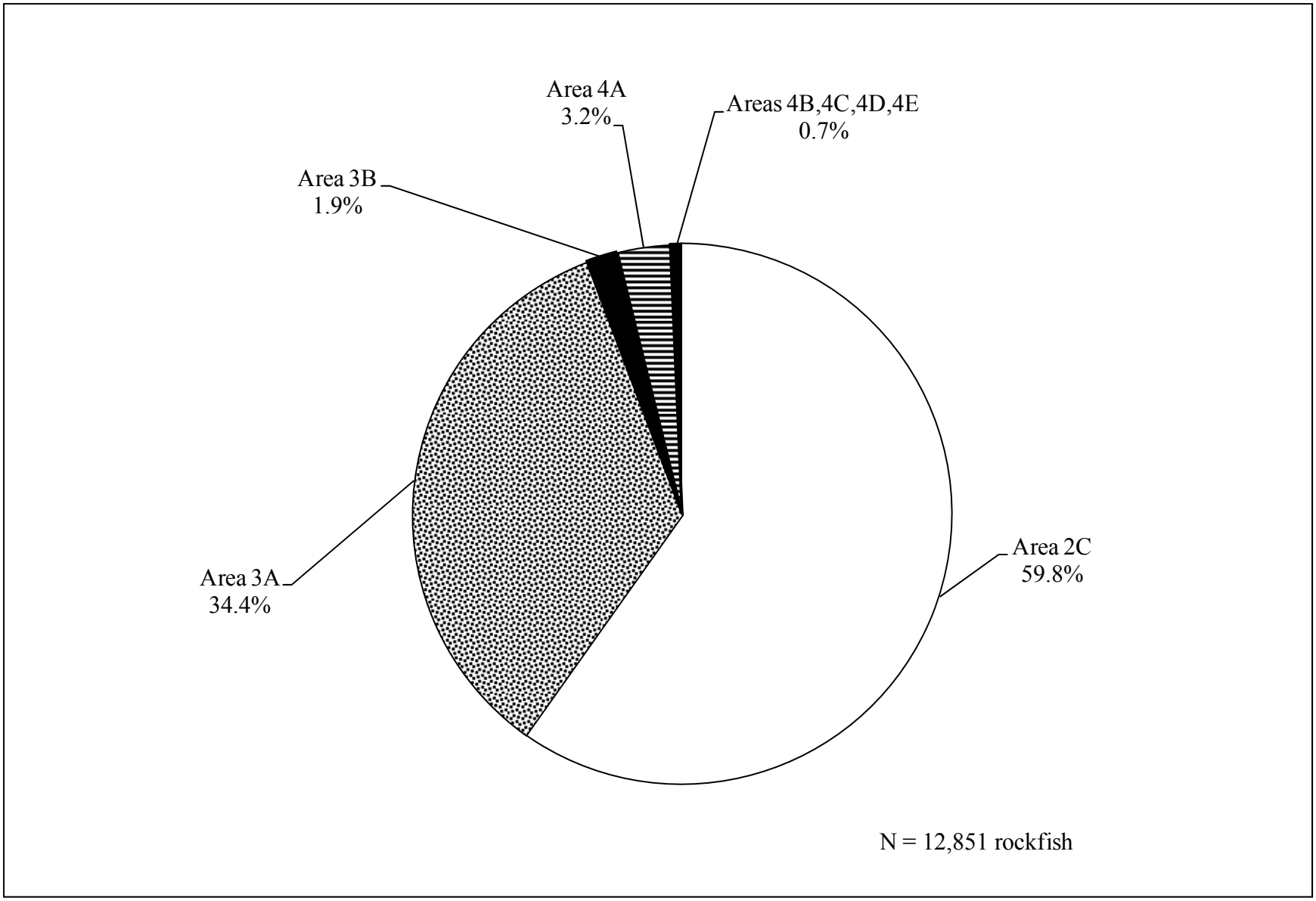

Figure 29.–Percentage of incidental harvest of rockfish by regulatory area fished, 2010.

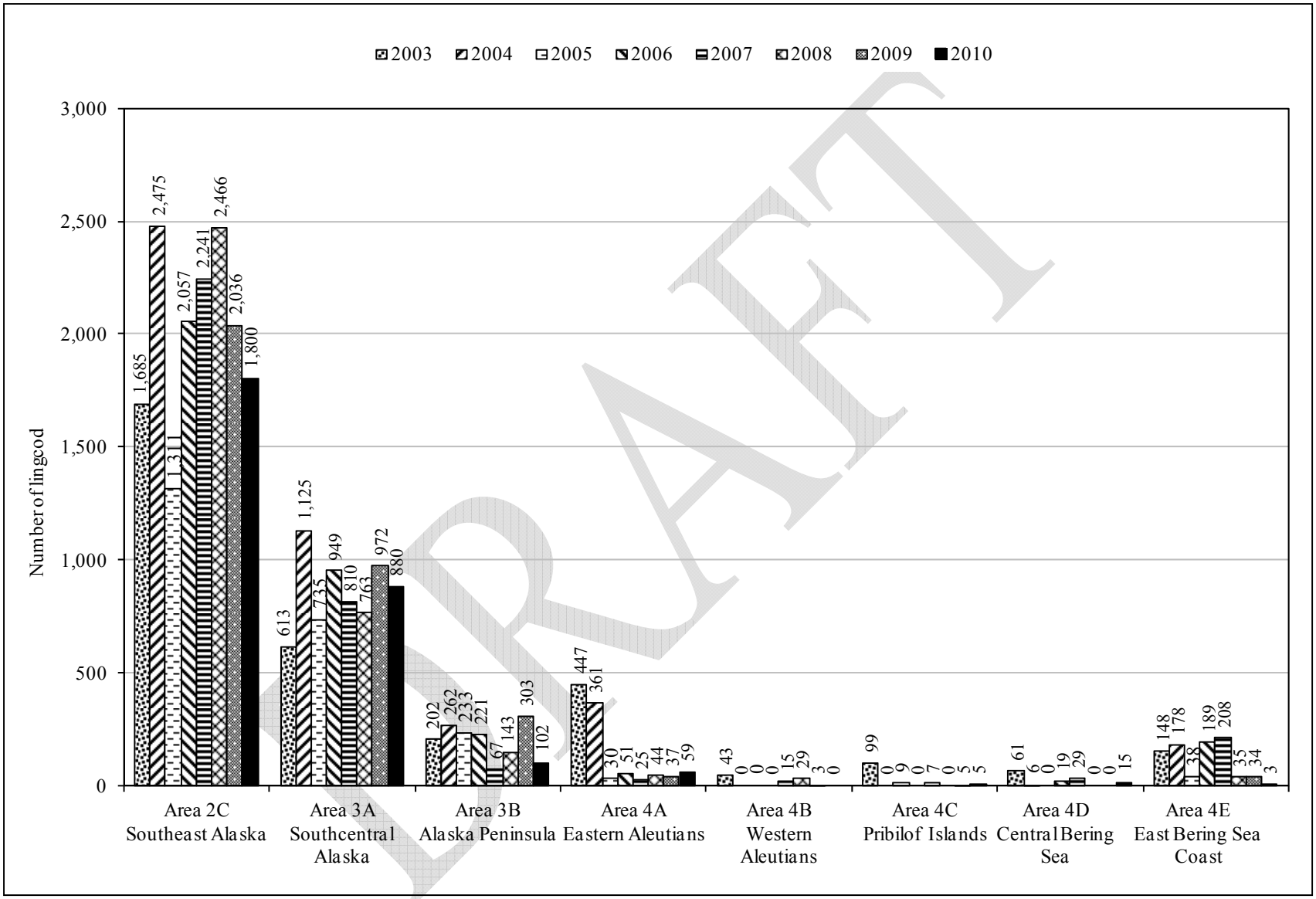

Figure 30.–Estimated incidental harvests of lingcod in the Alaska subsistence halibut fishery, number of fish, by regulatory area fished, 2003–2010.

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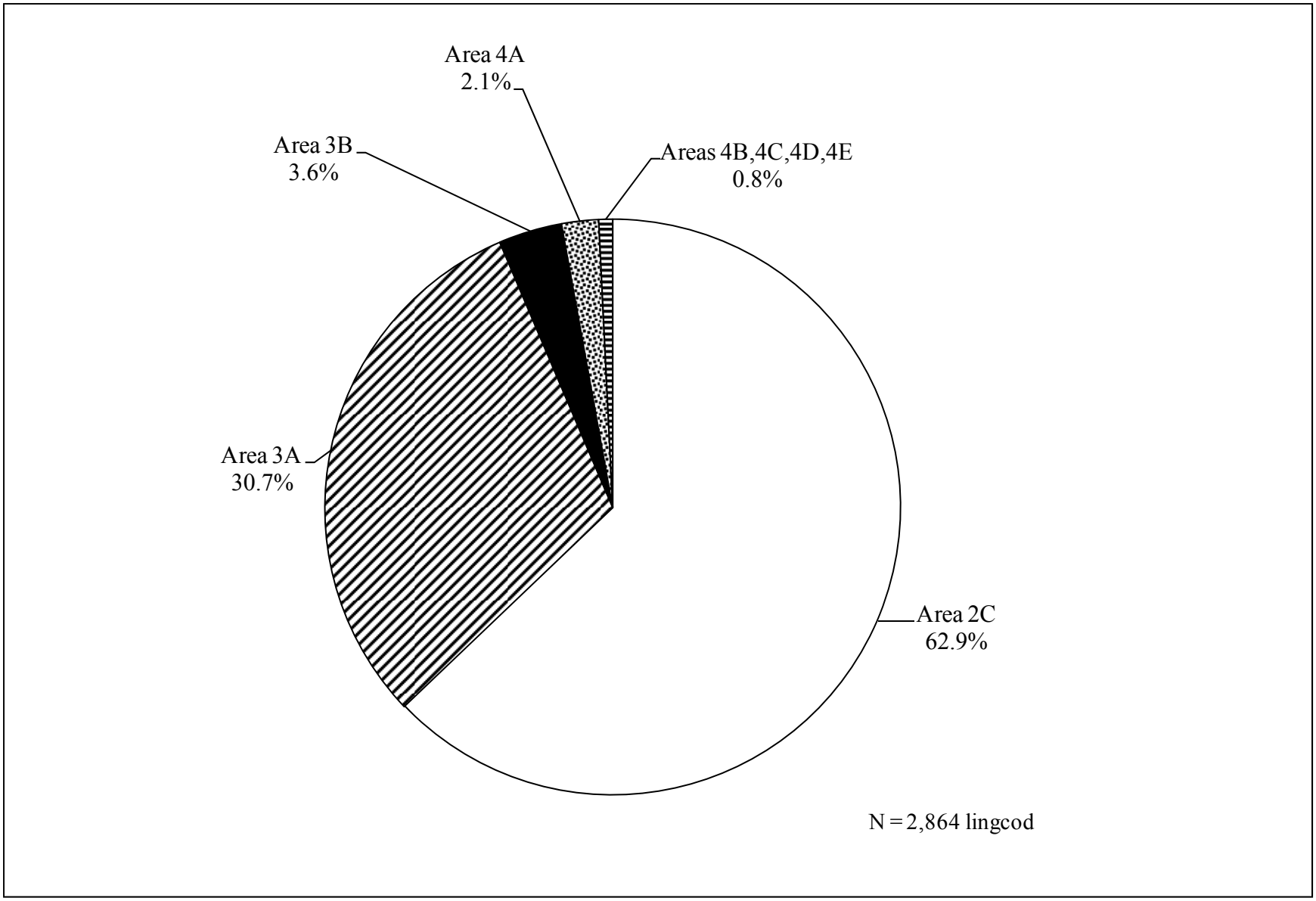

Figure 31.–Percentage of incidental harvest of lingcod by regulatory area fished, 2010.

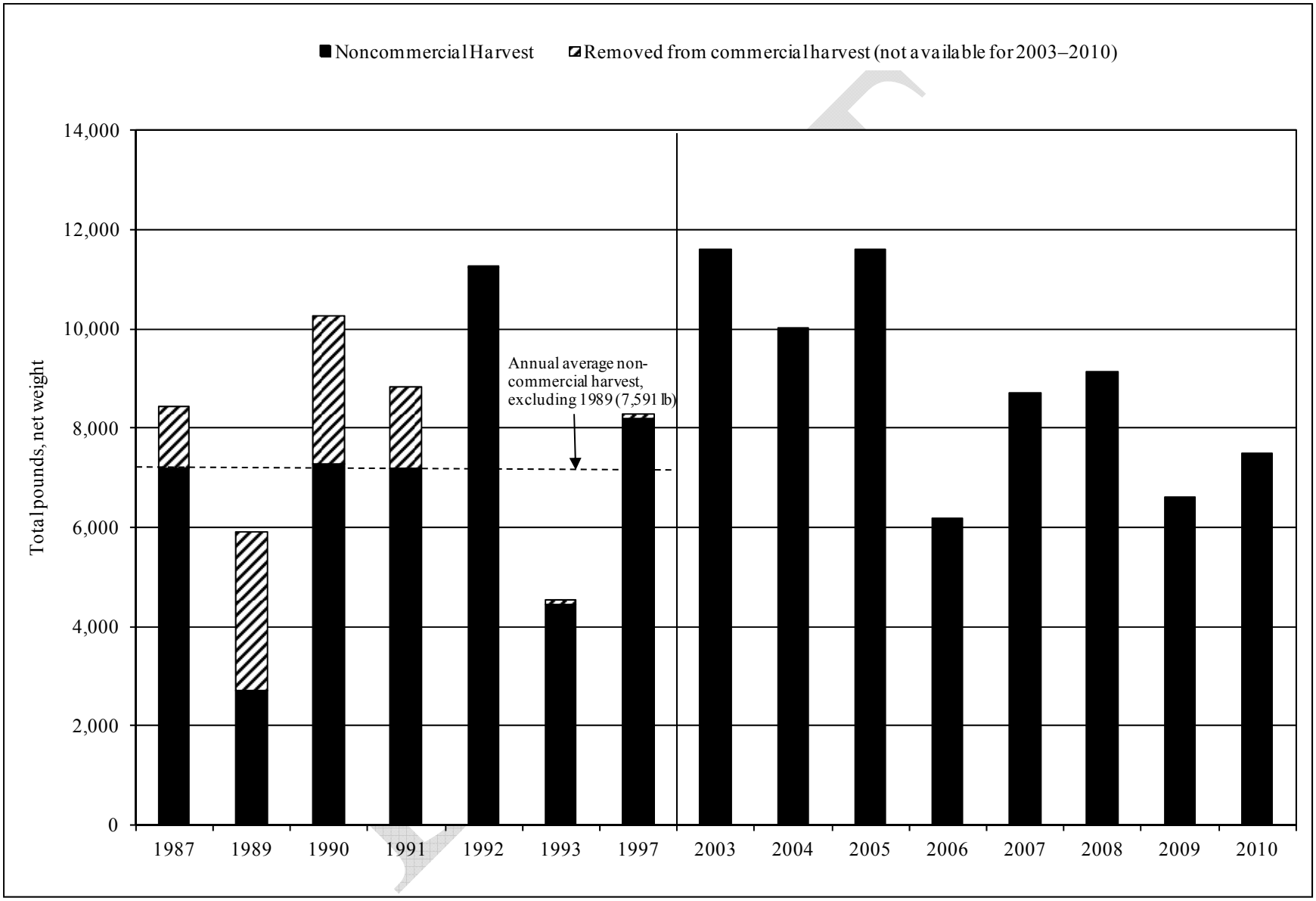

Figure 32.–Estimated harvests of halibut for home use, Port Graham.

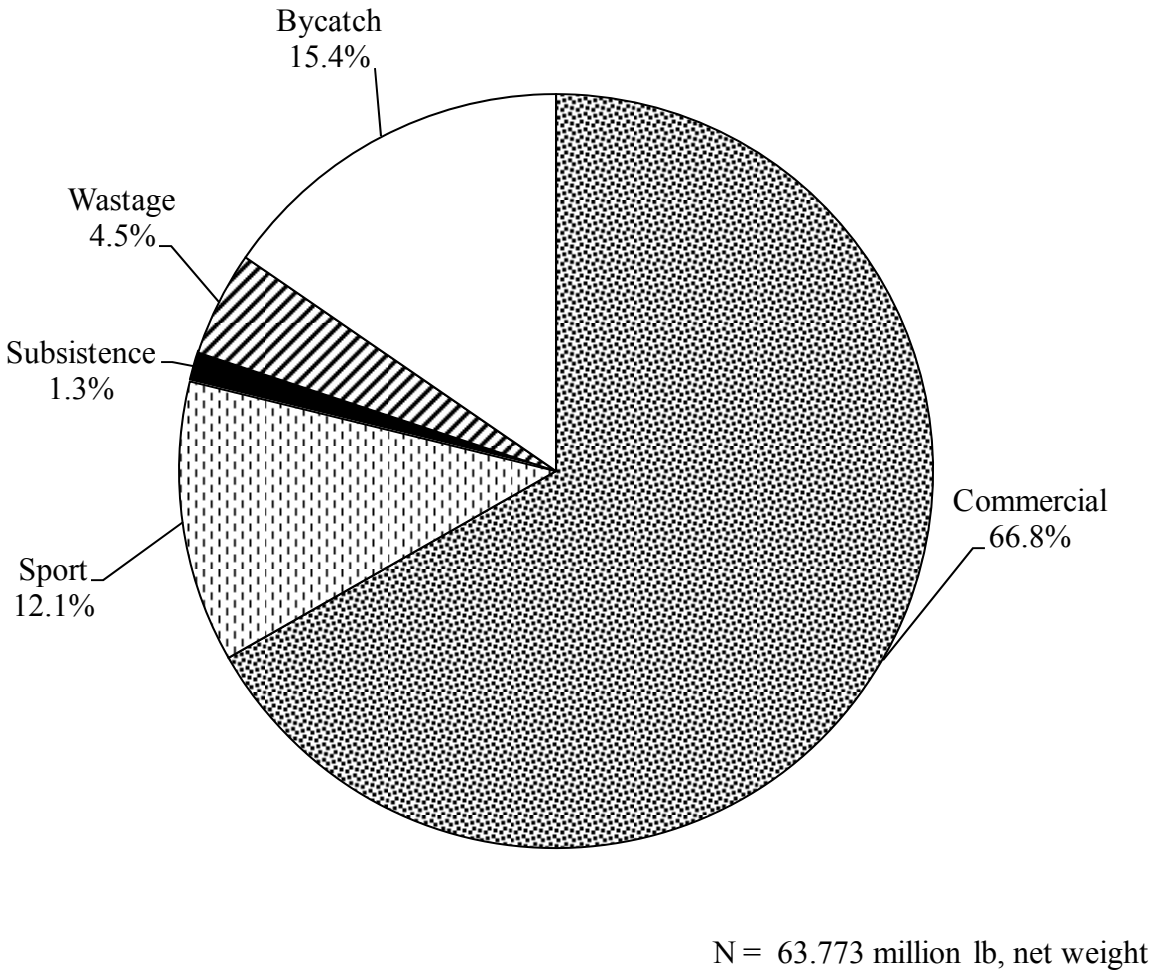

Figure 33.–Halibut removals, Alaska, 2010.

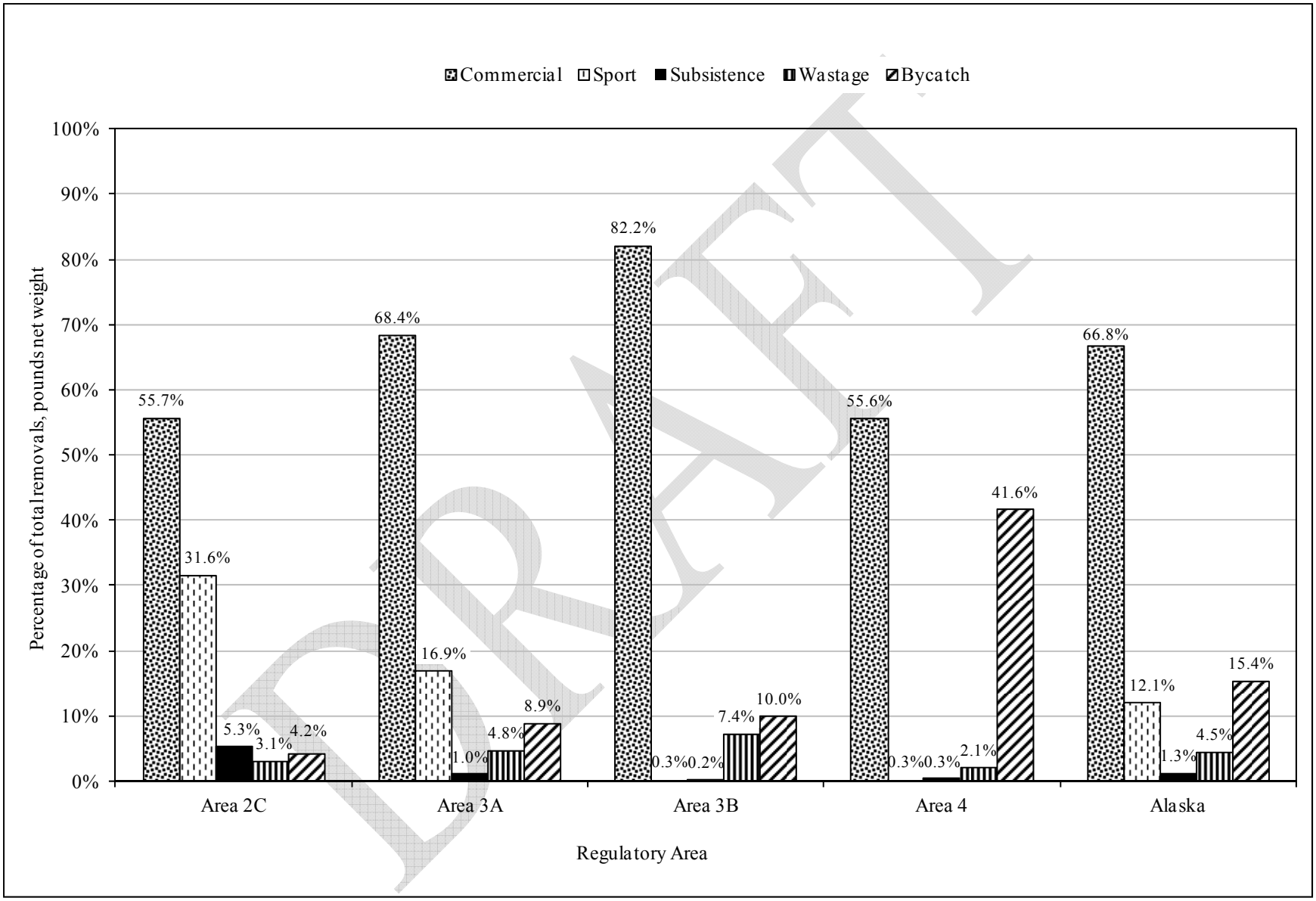

Figure 34.–Halibut removals in Alaska by regulatory area and removal category, 2010.

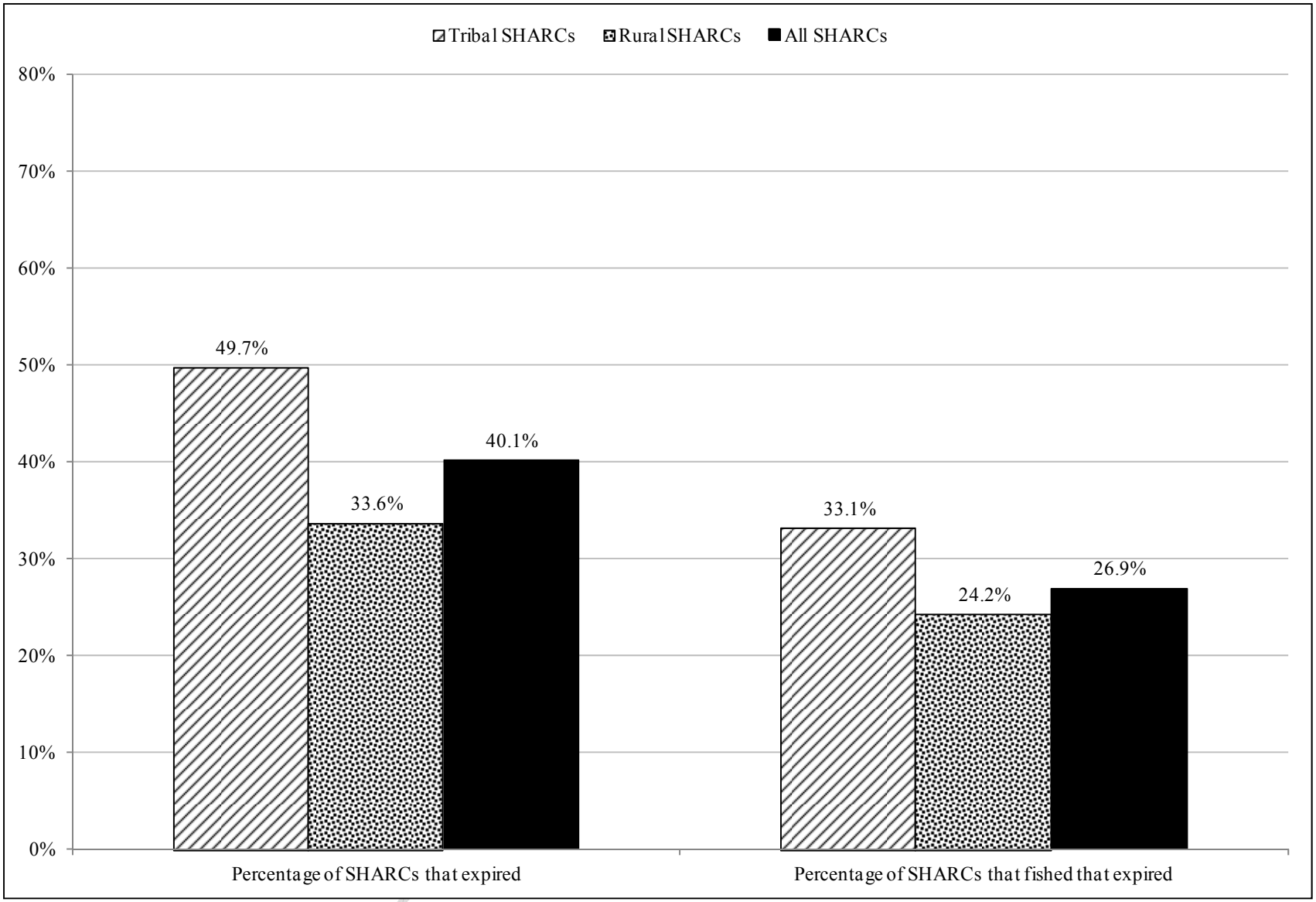

Figure 35.–Percentage of SHARC holders, and SHARC holders who fished for halibut, who did not renew their SHARC, by SHARC type, through 2009.

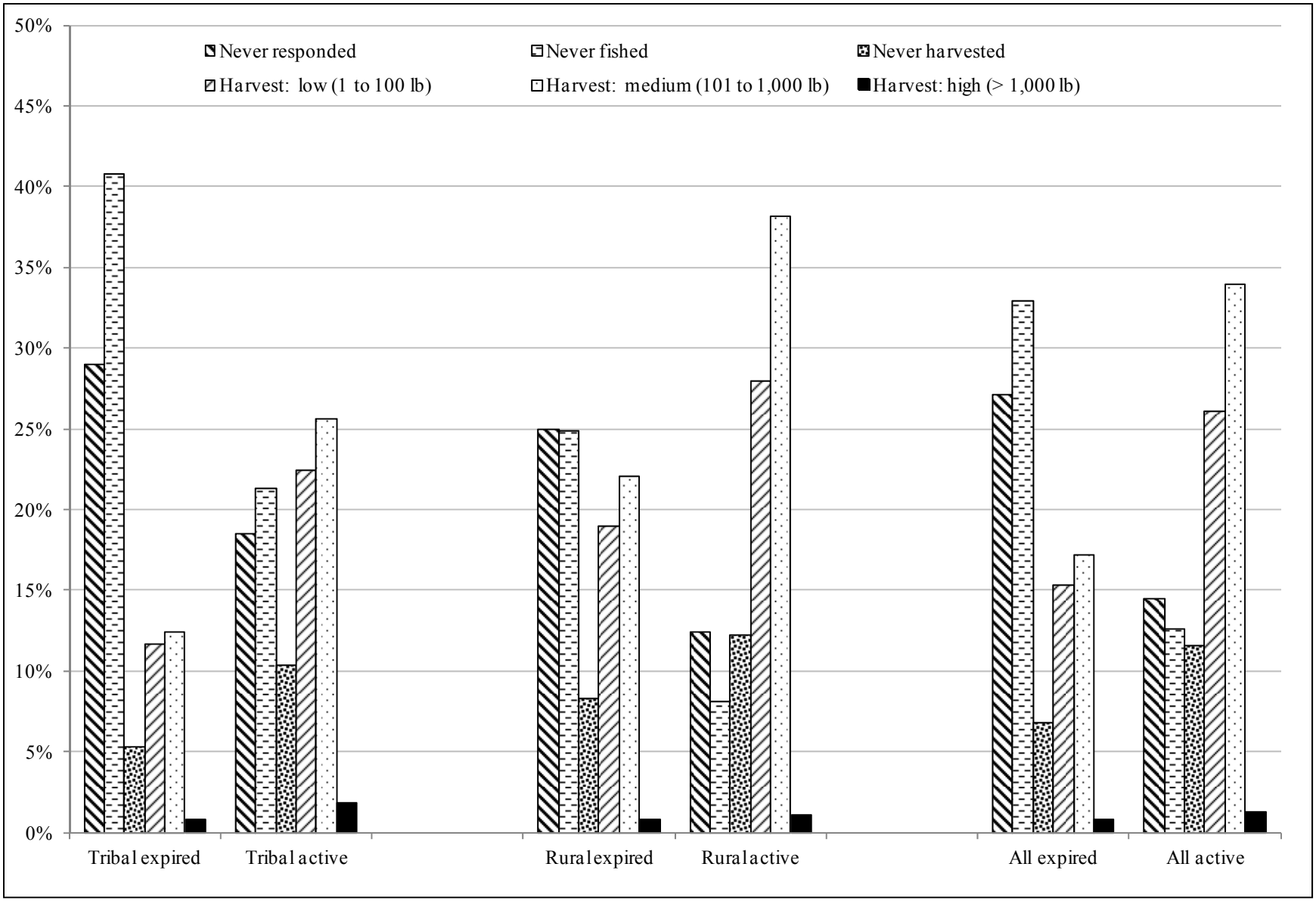

Figure 36.–Percentage of SHARCs that were not renewed by survey response type and SHARC type, through 2009.

APPENDICES

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Appendix A.–List of eligible tribes and rural communities (from Federal Register).

Chichagof Island at 57°22′03″ N. lat., 135°43′00″ W. long., and

(B) A line from Chichagof Island at 57°22′35″ N. lat., 135°41′18″ W. long. to Baranof Island at 57°22′17″ N. lat., 135°40′57″ W. lat.; and

(C) That is enclosed on the south and west by a line from Sitka Point at 56°59′23″ N. lat., 135°49′34″ W. long., to Hanus Point at 56°51′55″ N. lat., 135°30′30″ W. long.,

(D) To the green day marker in Dorothy Narrows at 56°49′17″ N. lat., 135°22′45″ W. long. to Baranof Island at 56°49′17″ N. lat., 135°22′36″ W. long.

(2) A person using a vessel greater than 35 ft (10.7 m) in overall length, as defined at 50 CFR 300.61, is prohibited from fishing for IFQ halibut with setline gear, as defined at 50 CFR 300.61, within Sitka Sound as defined in paragraph (d)(1)(i) of this section.

(3) A person using a vessel less than or equal to 35 ft (10.7 m) in overall length, as defined at 50 CFR 300.61:

(i) Is prohibited from fishing for IFQ halibut with setline gear within Sitka Sound, as defined in paragraph (d)(1)(ii) of this section, from June 1 through August 31; and

(ii) Is prohibited, during the remainder of the designated IFQ season, from retaining more than 2,000 lb (0.91 mt) of IFQ halibut within Sitka Sound, as defined in paragraph (d)(1)(ii) of this section, per IFQ fishing trip, as defined in 50 CFR 300.61.

(4) No charter vessel, as defined at 50 CFR 300.61, shall engage in sport fishing, as defined at 50 CFR 300.61(b), for halibut within Sitka Sound, as defined in paragraph (d)(1)(ii) of this section, from June 1 through August 31.

(i) No charter vessel shall retain halibut caught while engaged in sport fishing, as defined at 50 CFR 300.61(b), for other species, within Sitka Sound, as defined in paragraph (d)(1)(ii) of this section, from June 1 through August 31.

(ii) Notwithstanding paragraphs (d)(4) and (d)(4)(i) of this section, halibut harvested outside Sitka Sound, as defined in (d)(1)(ii) of this section, may be retained onboard a charter vessel engaged in sport fishing, as defined in 50 CFR 300.61(b), for other species within Sitka Sound, as defined in paragraph (d)(1)(ii) of this section, from June 1 through August 31.

(e) Sitka Pinnacles Marine Reserve. (1) For purposes of this paragraph (e), the Sitka Pinnacles Marine Reserve means an area totaling 2.5 square nm off Cape Edgecumbe, defined by straight lines connecting the following points in a counterclockwise manner:

56°55.5′N lat., 135°54.0′W long;
56°57.0′N lat., 135°54.0′W long;
56°57.0′N lat., 135°57.0′W long;
56°55.5′N lat., 135°57.0′W long.

(2) No person shall engage in commercial, sport or subsistence fishing, as defined at § 300.61, for halibut within the Sitka Pinnacles Marine Reserve.

(3) No person shall anchor a vessel within the Sitka Pinnacles Marine Reserve if halibut is on board.

(f) *Subsistence fishing in and off Alaska.* No person shall engage in subsistence fishing for halibut unless that person meets the requirements in paragraphs (f)(1) or (f)(2) of this section.

(1) A person is eligible to harvest subsistence halibut if he or she is a rural resident of a community with customary and traditional uses of halibut listed in the following table:

HALIBUT REGULATORY AREA 2C

Rural Community	Organized Entity
Angoon	Municipality
Coffman Cove	Municipality
Craig	Municipality
Edna Bay	Census Designated Place
Elfin Cove	Census Designated Place
Gustavus	Census Designated Place
Haines	Municipality
Hollis	Census Designated Place
Hoonah	Municipality
Hydaburg	Municipality
Hyder	Census Designated Place
Kake	Municipality
Kasaan	Municipality
Klawock	Municipality
Klukwan	Census Designated Place
Metlakatla	Census Designated Place
Meyers Chuck	Census Designated Place
Pelican	Municipality
Petersburg	Municipality
Point Baker	Census Designated Place
Port Alexander	Municipality
Port Protection	Census Designated Place
Saxman	Municipality
Sitka	Municipality
Skagway	Municipality
Tenakee Springs	Municipality
Thorne Bay	Municipality
Whale Pass	Census Designated Place
Wrangell	Municipality

HALIBUT REGULATORY AREA 3A

Rural Community	Organized Entity
Akhiok	Municipality
Chenega Bay	Census Designated Place
Cordova	Municipality

HALIBUT REGULATORY AREA 3A—Continued

Rural Community	Organized Entity
Karluk	Census Designated Place
Kodiak City	Municipality
Larsen Bay	Municipality
Nanwalek	Census Designated Place
Old Harbor	Municipality
Ouzinkie	Municipality
Port Graham	Census Designated Place
Port Lions	Municipality
Seldovia	Municipality
Tatitlek	Census Designated Place
Yakutat	Municipality

HALIBUT REGULATORY AREA 3B

Rural Community	Organized Entity
Chignik Bay	Municipality
Chignik Lagoon	Census Designated Place
Chignik Lake	Census Designated Place
Cold Bay	Municipality
False Pass	Municipality
Ivanof Bay	Census Designated Place
King Cove	Municipality
Nelson Lagoon	Census Designated Place
Perryville	Census Designated Place
Sand Point	Municipality

HALIBUT REGULATORY AREA 4A

Rural Community	Organized Entity
Akutan	Municipality
Nikolski	Census Designated Place
Unalaska	Municipality

HALIBUT REGULATORY AREA 4B

Rural Community	Organized Entity
Adak	Census Designated Place
Atka	Municipality

HALIBUT REGULATORY AREA 4C

Rural Community	Organized Entity
St. George	Municipality
St. Paul	Municipality

HALIBUT REGULATORY AREA 4D

Rural Community	Organized Entity
Gambell	Municipality
Savoonga	Municipality

HALIBUT REGULATORY AREA 4D—Continued

Rural Community	Organized Entity
Diomede (Inalik)	Municipality

HALIBUT REGULATORY AREA 4E

Rural Community	Organized Entity
Alakanuk	Municipality
Aleknegik	Municipality
Bethel	Municipality
Brevig Mission	Municipality
Chefornak	Municipality
Chevak	Municipality
Clark's Point	Municipality
Council	Census Designated Place
Dillingham	Municipality
Eek	Municipality
Egegik	Municipality
Elim	Municipality
Emmonak	Municipality
Golovin	Municipality
Goodnews Bay	Municipality
Hooper Bay	Municipality
King Salmon	Census Designated Place
Kipnuk	Census Designated Place
Kongiganak	Census Designated Place
Kotlik	Municipality
Koyuk	Municipality
Kwigillingok	Census Designated Place
Levelock	Census Designated Place
Manokotak	Municipality
Mekoryak	Municipality
Naknek	Census Designated Place
Napakiak	Municipality
Napaskiak	Municipality
Newtok	Census Designated Place
Nightmute	Municipality
Nome	Municipality
Oscarville	Census Designated Place
Pilot Point	Municipality
Platinum	Municipality
Port Heiden	Municipality
Quinhagak	Municipality
Scammon Bay	Municipality
Shaktoolik	Municipality
Sheldon Point (Nunam Iqua).	Municipality
Shishmaref	Municipality
Solomon	Census Designated Place
South Naknek	Census Designated Place
St. Michael	Municipality
Stebbins	Municipality
Teller	Municipality
Togiak	Municipality
Toksook Bay	Municipality
Tuntutuliak	Census Designated Place
Tununak	Census Designated Place

HALIBUT REGULATORY AREA 4E—Continued

Rural Community	Organized Entity
Twin Hills	Census Designated Place
Ugashik	Census Designated Place
Unalakleet	Municipality
Wales	Municipality
White Mountain	Municipality

(2) A person is eligible to harvest subsistence halibut if he or she is a member of an Alaska Native tribe with customary and traditional uses of halibut listed in the following table:

HALIBUT REGULATORY AREA 2C

Place with Tribal Headquarters	Organized Tribal Entity
Angoon	Angoon Community Association
Craig	Craig Community Association
Haines	Chilkoot Indian Association
Hoonah	Hoonah Indian Association
Hydaburg	Hydaburg Cooperative Association
Juneau	Aukquan Traditional Council
	Central Council Tlingit and Haida Indian Tribes
	Douglas Indian Association
Kake	Organized Village of Kake
Kasaan	Organized Village of Kasaan
Ketchikan	Ketchikan Indian Corporation
Klawock	Klawock Cooperative Association
Klukwan	Chilkat Indian Village
Metlakatla	Metlakatla Indian Community, Annette Island Reserve
Petersburg	Petersburg Indian Association
Saxman	Organized Village of Saxman
Sitka	Sitka Tribe of Alaska
Skagway	Skagway Village
Wrangell	Wrangell Cooperative Association

HALIBUT REGULATORY AREA 3A

Place with Tribal Headquarters	Organized Tribal Entity
Akhiok	Native Village of Akhiok
Chenega Bay	Native Village of Chanega

HALIBUT REGULATORY AREA 3A—Continued

Place with Tribal Headquarters	Organized Tribal Entity
Cordova	Native Village of Eyak
Karluk	Native Village of Karluk
Kenai-Soldotna	Kenaitze Indian Tribe
	Village of Salamatoff
Kodiak City	Lesnoi Village (Woody Island)
	Native Village of Afognak
	Shoonaq' Tribe of Kodiak
Larsen Bay	Native Village of Larsen Bay
Nanwalek	Native Village of Nanwalek
Ninilchik	Ninilchik Village
Old Harbor	Village of Old Harbor
Ouzinkie	Native Village of Ouzinkie
Port Graham	Native Village of Port Graham
Port Lions	Native Village of Port Lions
Seldovia	Seldovia Village Tribe
Tatitlek	Native Village of Tatitlek
Yakutat	Yakutat Tlingit Tribe

HALIBUT REGULATORY AREA 3B

Place with Tribal Headquarters	Organized Tribal Entity
Chignik Bay	Native Village of Chignik
Chignik Lagoon	Native Village of Chignik Lagoon
Chignik Lake	Chignik Lake Village
False Pass	Native Village of False Pass
Ivanof Bay	Ivanoff Bay Village
King Cove	Agdaagux Tribe of King Cove
	Native Village of Belkofski
Nelson Lagoon	Native Village of Nelson Lagoon
Perryville	Native Village of Perryville
Sand Point	Pauloff Harbor Village
	Native Village of Unga
	Qagan Toyagungin Tribe of Sand Point Village

HALIBUT REGULATORY AREA 4A

Place with Tribal Headquarters	Organized Tribal Entity
Akutan	Native Village of Akutan
Nikolski	Native Village of Nikolski
Unalaska	Qawalingin Tribe of Unalaska

HALIBUT REGULATORY AREA 4B

Place with Tribal Headquarters	Organized Tribal Entity
Atka	Native Village of Atka

HALIBUT REGULATORY AREA 4C

Place with Tribal Headquarters	Organized Tribal Entity
St. George	Pribilof Islands Aleut Communities of St. Paul Island and St. George Island
St. Paul	

HALIBUT REGULATORY AREA 4D

Place with Tribal Headquarters	Organized Tribal Entity
Gambell	Native Village of Gambell
Savoonga	Native Village of Savoonga
Diomede (Inalik)	Native Village of Diomede (Inalik)

HALIBUT REGULATORY AREA 4E

Place with Tribal Headquarters	Organized Tribal Entity
Alakanuk	Village of Alakanuk
Aleknagik	Native Village of Aleknagik
Bethel	Orutsararmuit Native Village
Brevig Mission	Native Village of Brevig Mission
Chefornak	Village of Chefornak
Chevak	Chevak Native Village
Clark's Point	Village of Clark's Point
Council	Native Village of Council
Dillingham	Native Village of Dillingham
	Native Village of Ekuk
	Native Village of Kanakanak
Eek	Native Village of Eek
Egegik	Egegik Village
	Village of Kanatak

HALIBUT REGULATORY AREA 4E—Continued

Place with Tribal Headquarters	Organized Tribal Entity
Elim	Native Village of Elim
Emmonak	Chuloonawick Native Village
	Emmonak Village
Golovin	Chinik Eskimo Community
Goodnews Bay	Native Village of Goodnews Bay
Hooper Bay	Native Village of Hooper Bay
	Native Village of Paimiut
King Salmon	King Salmon Tribal Council
Kipnuk	Native Village of Kipnuk
Kongiganak	Native Village of Kongiganak
Kotlik	Native Village of Hamilton
	Village of Bill Moore's Slough
	Village of Kotlik
Koyuk	Native Village of Koyuk
Kwigillingok	Native Village of Kwigillingok
Levelock	Levelock Village
Manokotak	Manokotak Village
Mekoryak	Native Village of Mekoryak
Naknek	Naknek Native Village
Napakiak	Native Village of Napakiak
Napaskiak	Native Village of Napaskiak
Newtok	Newtok Village
Nightmute	Native Village of Nightmute
	Umkumiute Native Village
Nome	King Island Native Community
	Nome Eskimo Community
Oscarville	Oscarville Traditional Village
Pilot Point	Native Village of Pilot Point
Platinum	Platinum Traditional Village
Port Heiden	Native Village of Port Heiden
Quinhagak	Native Village of Kwinhagak
Scammon Bay	Native Village of Scammon Bay
Shaktoolik	Native Village of Shaktoolik
Sheldon Point (Nuna Iqua).	Native Village of Sheldon's Point
Shishmaref	Native Village of Shishmaref
Solomon	Village of Solomon
South Naknek	South Naknek Village
St. Michael	Native Village of Saint Michael

HALIBUT REGULATORY AREA 4E—Continued

Place with Tribal Headquarters	Organized Tribal Entity
Stebbins	Stebbins Community Association
Teller	Native Village of Mary's Igloo
	Native Village of Teller
Togiak	Traditional Village of Togiak
Toksook Bay	Native Village of Toksook Bay
Tuntutuliak	Native Village of Tuntutuliak
Tununak	Native Village of Tununak
Twin Hills	Twin Hills Village
Ugashik	Ugashik Village
Unalakleet	Native Village of Unalakleet
Wales	Native Village of Wales
White Mountain	Native Village of White Mountain

(g) *Limitations on subsistence fishing.* Subsistence fishing for halibut may be conducted only by persons who qualify for such fishing pursuant to paragraph (f) of this section and who hold a valid subsistence halibut registration certificate in that person's name issued by NMFS pursuant to paragraph (h) of this section, provided that such fishing is consistent with the following limitations.

(1) Subsistence fishing is limited to setline gear and hand-held gear, including longline, handline, rod and reel, spear, jig and hand-troll gear.

(i) Subsistence fishing gear must not have more than 30 hooks per person registered in accordance with paragraph (h) of this section and on board the vessel from which gear is being set or retrieved.

(ii) All setline gear marker buoys carried on board or used by any vessel regulated under this section shall be marked with the following: first initial, last name, and address (street, city, and state), followed by the letter "S" to indicate that it is used to harvest subsistence halibut.

(iii) Markings on setline marker buoys shall be in characters at least 4 inches (10.16 cm) in height and 0.5 inch (1.27 cm) in width in a contrasting color visible above the water line and shall be maintained so the markings are clearly visible.

(2) The daily retention of subsistence halibut in rural areas is limited to no more than 20 fish per person eligible to conduct subsistence fishing for halibut under paragraph (g) of this section,

Appendix B.–Letter sent to tribes about the project.

STATE OF ALASKA

DEPARTMENT OF FISH AND GAME

DIVISION OF SUBSISTENCE

SEAN PARNELL, GOVERNOR

333 Raspberry Road
ANCHORAGE, AK 99518-1599
PHONE: (907) 267-2353
FAX: (907) 267-2450

February 7, 2011

SUBJECT: Subsistence Halibut Fishing Report and Harvest Survey

In January 2010, we informed you about the seventh year of the project conducted by the Division of Subsistence of ADF&G to estimate the subsistence harvests of halibut in Alaska. As part of a contract with the National Marine Fisheries Service (NMFS), in early 2010 we mailed a short (one-page) questionnaire to every person who obtained a subsistence halibut registration certificate (called a "SHARC") from NMFS. Through the survey, we collected information about participation in the fishery and the number of halibut, rockfish, and lingcod harvested for subsistence use in 2009. Participation in the survey was voluntary. Of the 11,733 SHARC holders, 6,944 (59%) completed the survey – an excellent response.

We have completed the final report for the project as part of our Technical Paper Series (No. 357). A copy is enclosed. Also enclosed is a copy of a short overview of the study findings. You can also obtain the overview and the complete report at the Division of Subsistence website at www.subsistence.adfg.state.ak.us . Please contact us if you have questions.

We also wanted to let you know that we will be doing the survey again beginning in early February 2011 to collect information about subsistence halibut harvests in 2010. Again, we'll be mailing a short questionnaire to every SHARC holder, and asking them to voluntarily fill it out and send it back to us (we pay the postage). We will again compile the harvest information in a report to NMFS that will be available to tribes and to the public in late 2011. In our view, collecting and reporting accurate information about subsistence halibut harvests is important in supporting this fishery.

In addition to mailing out the survey forms, Division of Subsistence staff plan to visit some communities in 2011 to provide information about the subsistence halibut fishery program, and to encourage subsistence fishers to obtain registration cards (SHARCs) and return the surveys. We will, of course, coordinate these visits with tribal governments. We will also coordinate collection of subsistence halibut harvest information with other subsistence projects taking place in some communities.

As we noted, an important feature of the subsistence halibut regulations is that eligible people who want to subsistence fish need to obtain a subsistence halibut registration certificate (called a "SHARC" for short). Applications are available from NMFS at the address below. People can also submit applications on the Internet by logging on to: www.fakr.noaa.gov/ram and following the links to the subsistence halibut program. We encourage you to get the word out about this program to your tribal members who subsistence fish for halibut. More information about the subsistence halibut fishing program is available from NMFS as follows:

On the Internet:	www.fakr.noaa.gov/ram/subsistence/halibut.htm
By e-mail:	RAM.Alaska@noaa.gov
By phone:	800-304-4846 (option #2)
By mail:	Alaska Region, National Marine Fisheries Service Restricted Access Management (RAM) Program PO Box 21668 Juneau, AK 99802

In February, we will be contacting tribes in communities that we would like to visit. Again, the survey form itself will be mailed in early February. In the meantime, if you have questions about our project, please contact me (see below), Dave Koster (david.koster@alaska.gov; 907-267-2371), or Lauren Sill (907-465-3617).

Sincerely,

James Fall
Statewide Program Manager
907-267-2359
jim.fall@alaska.gov

Enclosures: "Subsistence Harvests of Pacific Halibut in Alaska, 2009"; Technical Paper 357.

Appendix C.–Survey instrument.

<BARCODE>

Fold on the dotted lines to mail in your survey

NO POSTAGE
NECESSARY
IF MAILED
IN THE
UNITED STATES

BUSINESS REPLY MAIL
FIRST-CLASS MAIL PERMIT # 37 ANCHORAGE AK

POSTAGE WILL BE PAID BY ADDRESSEE

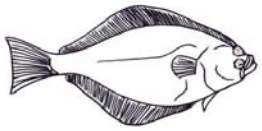
AK DEPT OF FISH AND GAME
SUBSISTENCE DIVISION
333 RASPBERRY RD
ANCHORAGE AK 99518-9961

<BARCODE>

Tape Closed

SUBSISTENCE HALIBUT HARVEST SURVEY 2010

National Marine Fisheries Service &
AK Dept. Fish & Game/Division of Subsistence
(please make address changes as needed)



2010

SHARC Holder's Name			Date of Birth
First Name	M.I.	Last Name	Mo. Day Year
Mailing Address			
Number and street or PO Box	City	State	Zip code
Community of Residence	Daytime Telephone	SHARC Number	
Tribe (if you are on a tribal role)			

Please answer each question to the best of your knowledge

1. Did you subsistence fish for halibut during 2010? (Please check one) ☐ Yes ☐ No

2. How many halibut did you harvest with set hook gear (long-line, skate) while subsistence fishing during 2010?
("Set hook gear" is hook-and-line set with anchors and buoys. Please write in both the number and pounds of halibut. Pounds should be round (live) weight.)

2a. Number of halibut ____ 2b. Pounds of halibut ____ 2c. How many hooks did you usually set? ____ 2d. Water body, bay or sound usually fished ____

3. How many halibut did you harvest with hook-and-rod or hand-held lines while subsistence fishing during 2010?
(Please write in both the number and pounds of halibut. Do not count fish reported in Question 7. Pounds should be round (live) weight.)

3a. Number of halibut ____ 3b. Pounds of halibut ____ 3c. Water body, bay or sound usually fished ____

4. How many lingcod and rockfish did you harvest while subsistence halibut fishing during 2010?
(Please write in numbers of fish only.)

4a. Number of lingcod ____ 4b. Number of rockfish ____

5. How many trips did you take to fish for subsistence halibut in 2010?
(Please include trips where halibut was targeted but none were caught) ____

6. Did you sport fish for halibut during 2010? (Please check one) ☐ Yes ☐ No

7. How many halibut did you harvest while **sport fishing** during 2010?
(Please write in both the number and pounds of halibut. Do not count fish reported in Question 3. Pounds should be round (live) weight.)

7a. Number of Halibut ____ 7b. Pounds of Halibut ____ 7c. Water body, bay or sound usually fished ____

THANK YOU!

Please mail the completed survey to:
Subsistence Halibut Harvest Survey
Alaska Dept. Fish & Game/Div. of Subsistence
333 Raspberry Road
Anchorage AK 99518-1599

QUESTIONS?

ADF&G 1-907-267-2353
NMFS at 1-800-304-4846 (option 2)
dfg.sub.halibut@alaska.gov

Under AS 16.05.815, Alaska state law prevents the transfer of certain information based on confidentiality. Such information includes, but is not limited to, personal information contained in fish and wildlife harvest and usage data; fish tickets; fish ticket computer runs; intents to operate; processor annual reports; log books or other catch records; and individual or vessel harvest records that are correlated to their harvest or effort. Individual data collected in this survey is confidential under this statute.

INSTRUCTIONS FOR SUBSISTENCE HALIBUT HARVEST SURVEY, 2010

PLEASE COMPLETE AND RETURN THE SURVEY EVEN IF YOUR SHARC HAS EXPIRED.

Question 1.

- Mark "yes" even if you fished but were unsuccessful

Questions 2 and 3.

- Include only those fish harvested by you, the individual fisher (SHARC holder). If you fished with someone else and split the catch, count only your share of the catch. Other household members who harvested halibut should fill out their own forms.
- Include fish that you harvested and kept for your household's use AND fish you harvested and gave away or traded. DO NOT include fish that you received from someone else.
- Identify both the number and pounds of halibut harvested; if you cannot provide both, please provide what you are able. Pounds should be **ROUND (LIVE) WEIGHT**. If you only know the dressed weight of your halibut harvest, record that number and make a note of "dressed, head on" (equals about 88% of round weight) or "dressed, head off" (equals about 75% of round weight).
- Number of hooks: write in the number that you use most often each time you set a line. That is, the number of hooks you usually have on your longline/skate.
- Water body, bay, or sound: record the general location where you did most of your subsistence halibut fishing (for example, "Chiniak Bay," "Sitka Sound"). If you used more than one general area for a significant portion of your catch, please provide the portion of your harvest from each.

Question 4.

- DO NOT include all the lingcod and rockfish you harvested, <u>but just those you harvested while subsistence halibut fishing.</u>
- "Rockfish" means all fish of the genus *Sebastes*. These include fish with common English names such as red snapper, black bass, and sea bass.
- "Rockfish" DO NOT include sculpin, greenling, sablefish (black cod), tomcod, or Pacific cod. Please DO NOT include these other fish in your harvest estimates for rockfish.

Question 5.

- Enter the number of trips taken for subsistence halibut. Please include all trips where you subsistence fished for halibut, even if you were not successful.

Questions 6 and 7.

- Sport fishing for halibut requires an Alaska sport fishing license. Sport fishers for halibut must fish with a line attached to a rod or pole. There is a limit of two hooks. The daily bag limit is two halibut and the possession limit is four halibut.

Do you still have questions?

Call the National Marine Fisheries Service at: 1-800-304-4846 (option 2);
Or visit http://www.fakr.noaa.gov/ram/subsistence/halibut.htm;
Or call ADF&G Division of Subsistence at: 907-267-2353;
Or contact the Division of Subsistence via e-mail at: dfg.sub.halibut@alaska.gov

THANK YOU FOR PARTICIPATING IN THIS SURVEY!

ALASKA DEPARTMENT OF FISH & GAME
Subsistence Halibut Survey
Division of Subsistence
333 Raspberry Rd.
Anchorage, Alaska 99518-1599

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NATIONAL MARINE FISHERIES SERVICE &
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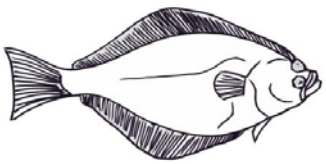

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Appendix D.–Set of frequently asked questions and responses.

RAM: FAQ's for Subsistence Halibut Harvest Survey

The following is a list of standard responses that may be given to common questions regarding the Subsistence Halibut Harvest Survey. Any question that cannot be answered by the responses below or by other personnel in RAM division may be directed to ADF&G Division of Subsistence at the phone number(s) indicated at the bottom of the page.

1. I got my SHARC from NMFS. Why is this survey being done by ADF&G?

- NMFS contracted with ADF&G Division of Subsistence to conduct this survey because the Division of Subsistence has a lot of experience in collecting and analyzing subsistence harvest data. They have staff who are familiar with local communities and subsistence harvest patterns.

2. What happens to this information after I send it in?

- The survey responses are entered into a database by ADF&G. They will use the responses to estimate and report subsistence harvests at a community level. NMFS will receive a report from ADF&G with the survey results. The report will not include individual responses.

3. Why do you need my birth date?

- ADF&G needs birth date only to distinguish between individuals who may have the same name. For instance, there may be many John Smith's in area 2C. Providing birth date prevents ADF&G from counting the same person more than once or even counting multiple people as the same person. However, ADF&G is required to maintain birth date confidential under the Privacy Act.

4. I live in an isolated area near [insert]. What do I put down as my Community of Residence?

- Your Community of Residence is defined as the geographical location of your home. If you live in a remote location, you may list the community nearest your home. "Community of residence" is not necessarily the same as where you receive your mail.

5. The survey asks me to put down Pounds of Halibut. Does this mean I should weigh all my halibut on a scale?

- No. While an actual weight using a scale would be helpful to ADF&G, you only need to estimate the total pounds of halibut you harvested. If you know how many halibut you harvested, but have no idea how much they weighed, leave the "pounds" area blank. If you know about how many pounds you harvested but have no idea how many fish you caught, leave the "number" area blank. We will calculate the pounds or number based on standard conversion factors. However, we prefer that you do your best to provide an estimate of both numbers and pounds, because this information is lacking for the subsistence fishery.

6. Should I record the weight of my halibut before or after I process them?

- The survey asks for **ROUND WEIGHT**, which is the weight of the fish BEFORE it is gutted and beheaded. If you only know the approximate weight of the fish after you gutted them, write "dressed, head on" next to the weight (this equals about 88% of round/live weight). If you only know the approximate weight of the fish after you gutted and beheaded them, write "dressed, head off" next to the weight (this equals about 72% of round/live weight).

7. I fish near [insert]. What is the water body, bay, or sound?

- The water body, bay, or sound is the area in which you subsistence fished for halibut. For instance, a subsistence fisher from Sitka might put down that he subsistence fished for halibut in Sitka *Sound* or a subsistence fisher from Kodiak might put down that he subsistence fished for halibut in Chiniak *Bay*. However, a subsistence fisher from Akutan might put down that he subsistence fished for halibut in Unimak Pass, which is neither a bay nor sound but would be classified as a *water body*. Likewise, a subsistence fisher from St. Paul might put down that he subsistence fished for halibut in the Bering Sea, which is also a *water body*. However, the more specific the description, the more helpful it will be to ADF&G.

8. What is a lingcod?

- A lingcod is a relatively long fish that ranges from black, to grey, to greenish, to bluish-purple, usually with dark brown or copper blotches arranged in clusters, and has a large mouth with 18 large teeth. For a more accurate description and local or tribal names, you can refer to the sheet distributed by ADF&G in the original mailing that also contained your Subsistence Halibut Harvest Survey or visit the NMFS website http://www.afsc.noaa.gov/race/media/photo_gallery/fish_by_family.htm.

9. What is a rockfish?

- These fish are characterized by having bony plates or spines on the head and body and a large mouth. Some species are brightly colored, and many are difficult to distinguish from one another. They are also known as sea bass, black bass, and red snapper. For a more accurate description and local or tribal names, you can refer to the instruction sheet distributed by ADF&G in the original mailing that also contained your Subsistence Halibut Harvest Survey or visit the NMFS website http://www.afsc.noaa.gov/race/media/photo_gallery/fish_by_family.htm.

10. What is "sport fishing"?

- Sport fishing is defined as all fishing other than commercial fishing, personal use fishing, and subsistence fishing. Typically, sport fishing is conducted with a rod and reel using no more than 2 hooks under ADF&G regulations.

11. Why do I need to report my sport-caught halibut on this subsistence harvest survey form (Question 6)?

- The survey is designed to prevent double-counting of harvested halibut. If you fish for halibut with a rod and reel and have a sport fishing license, you may include your harvests in Question 2 if you consider your activity to be subsistence fishing, or under Question 6 if you consider it sport fishing. DO NOT INCLUDE THE SAME FISH IN YOUR REPSONSES TO QUESTIONS 2 AND 6. We will exclude responses to Question 6 from our estimate of subsistence halibut harvests. Holders of sport fishing licenses may receive a survey from ADF&G about their sport harvests. If you do, you should report the halibut you record in Question 6 in that survey too, but do not include the halibut you record in Question 2.

All other inquiries regarding the survey should be directed to ADF&G Division of Subsistence at (907) 267-2353 (Anchorage) or 907-465-3617, or e-mail at subsistence_halibut@fishgame.state.ak.us

Appendix E-1.–Results from returned surveys.

		Return rate			Subsistence fished		Subsistence harvest		Sport fished		Sport harvest		Lingcod bycatch		Rockfish bycatch	
Tribal name	Regulatory area	SHARCs issued[a]	Surveys returned	Percent returned	Number respondents	Percent respondents	Number halibut	Pounds halibut[b]	Number respondents	Percent respondents	Number halibut	Pounds halibut[b]	Number respondents	Number lingcod	Number respondents	Number rockfish
Angoon Community Association	2C	92	73	79.3%	35	47.9%	428	10,603	8	11.0%	43	1,330	1	5	11	97
Aukquan Traditional Council	2C	1														
Central Council Tlingit and Haida Indian Tribes	2C	488	215	44.1%	81	37.7%	894	20,829	36	16.7%	164	3,565	7	56	19	170
Chilkat Indian Village	2C	23	17	73.9%	4	23.5%	41	775	1	5.9%	10	40	1	2	1	6
Chilkoot Indian Association	2C	48	22	45.8%	10	45.5%	52	2,448	2	9.1%	3	110	0	0	0	0
Craig Community Association	2C	63	33	52.4%	13	39.4%	152	4,392	0	0.0%	0	0	0	0	5	31
Douglas Indian Association	2C	16	3	18.8%	0	0.0%	0	0	0	0.0%	0	0	0	0	0	0
Hoonah Indian Association	2C	141	68	48.2%	25	36.8%	249	7,290	5	7.4%	5	130	0	0	1	5
Hydaburg Cooperative Association	2C	124	108	87.1%	55	50.9%	452	25,210	5	4.6%	9	375	14	50	27	508
Ketchikan Indian Corporation	2C	503	319	63.4%	87	27.3%	959	28,510	65	20.4%	154	4,142	10	50	31	208
Klawock Cooperative Association	2C	80	31	38.8%	11	35.5%	69	2,315	3	9.7%	3	120	2	21	5	89
Metlakatla Indian Community, Annette Island Reserve	2C	172	76	44.2%	23	30.3%	268	8,480	8	10.5%	11	317	10	48	11	149
Organized Village of Kake	2C	80	54	67.5%	18	33.3%	165	5,387	1	1.9%	1	40	1	1	3	17
Organized Village of Kasaan	2C	8	4	50.0%	2	50.0%	8	321	2	50.0%	4	120	0	0	1	6
Organized Village of Saxman	2C	37	18	48.6%	11	61.1%	120	2,505	6	33.3%	77	2,460	1	5	2	4
Petersburg Indian Association	2C	73	40	54.8%	15	37.5%	132	2,977	11	27.5%	29	720	0	0	1	5
Sitka Tribe of Alaska	2C	289	152	52.6%	70	46.1%	388	11,305	8	5.3%	11	160	16	60	24	210
Skagway Village	2C	3														
Wrangell Cooperative Association	2C	94	62	66.0%	28	45.2%	206	6,291	11	17.7%	36	1,095	1	1	6	60

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Table E-1.–Page 2 of 12.

Tribal name	Regulatory area	Return rate			Subsistence fished		Subsistence harvest		Sport fished		Sport harvest		Lingcod bycatch		Rockfish bycatch	
		SHARCs issued[a]	Surveys returned	Percent returned	Number respondents	Percent respondents	Number halibut	Pounds halibut[b]	Number respondents	Percent respondents	Number halibut	Pounds halibut[b]	Number respondents	Number lingcod	Number respondents	Number rockfish
Subtotal, Area 2C		**2,335**	**1,298**	**55.6%**	**489**	**37.7%**	**4,585**	**139,703**	**172**	**13.3%**	**560**	**14,724**	**64**	**299**	**148**	**1,565**
Kenaitze Indian Tribe	3A	123	61	49.6%	14	23.0%	173	6,188	10	16.4%	29	920	2	6	0	0
Lesnoi Village (Woody Island)	3A	71	39	54.9%	4	10.3%	28	760	2	5.1%	3	40	2	3	2	15
Native Village of Afognak	3A	24	14	58.3%	9	64.3%	65	1,227	3	21.4%	7	180	0	0	1	12
Native Village of Akhiok	3A	9	2	22.2%	2	100.0%	13	348	1	50.0%	2	12	0	0	1	10
Native Village of Chenega	3A	17	8	47.1%	4	50.0%	58	3,510	2	25.0%	3	160	3	4	4	50
Native Village of Eyak	3A	80	41	51.3%	16	39.0%	188	3,660	7	17.1%	13	1,095	2	3	4	31
Native Village of Karluk	3A	4														
Native Village of Larsen Bay	3A	37	20	54.1%	15	75.0%	141	3,212	8	40.0%	61	2,655	4	42	4	44
Native Village of Nanwalek	3A	44	18	40.9%	18	100.0%	337	7,540	1	5.6%	4	55	4	33	3	110
Native Village of Ouzinkie	3A	37	17	45.9%	9	52.9%	72	1,991	6	35.3%	17	500	1	1	1	20
Native Village of Port Graham	3A	43	25	58.1%	14	56.0%	342	12,478	3	12.0%	13	195	3	22	4	269
Native Village of Port Lions	3A	32	22	68.8%	13	59.1%	117	2,965	8	36.4%	43	1,340	2	22	2	30
Native Village of Tatitlek	3A	23	11	47.8%	5	45.5%	70	1,410	1	9.1%	6	200	1	3	3	10
Ninilchik Village	3A	81	40	49.4%	10	25.0%	971	5,939	11	27.5%	40	665	0	0	0	0
Seldovia Village Tribe	3A	63	35	55.6%	17	48.6%	264	6,167	4	11.4%	13	175	1	2	4	26
Sun'aq Tribe of Kodiak (formerly Shoonaq')	3A	126	48	38.1%	26	54.2%	234	8,383	9	18.8%	60	1,519	4	8	6	67
Village of Kanatak	3A	18	5	27.8%	0	0.0%	0	0	0	0.0%	0	0	0	0	0	0
Village of Old Harbor	3A	46	19	41.3%	8	42.1%	52	1,595	1	5.3%	4	100	1	1	1	20
Village of Salamatoff	3A	21	13	61.9%	3	23.1%	54	814	1	7.7%	3	150	0	0	0	0
Yakutat Tlingit Tribe	3A	41	21	51.2%	11	52.4%	198	6,579	0	0.0%	0	0	5	42	3	233
Subtotal, Area 3A		**940**	**459**	**48.8%**	**198**	**43.1%**	**3,377**	**74,766**	**78**	**17.0%**	**1,221**	**9,961**	**35**	**192**	**43**	**947**

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Table E-1.–Page 3 of 12.

Tribal name	Regulatory area	Return rate			Subsistence fished		Subsistence harvest		Sport fished		Sport harvest		Lingcod bycatch		Rockfish bycatch	
		SHARCs issued[a]	Surveys returned	Percent returned	Number respondents	Percent respondents	Number halibut	Pounds halibut[b]	Number respondents	Percent respondents	Number halibut	Pounds halibut[b]	Number respondents	Number lingcod	Number respondents	Number rockfish
Agdaagux Tribe of King Cove	3B	72	38	52.8%	21	55.3%	224	4,487	7	18.4%	32	1,030	1	30	1	20
Chignik Lake Village	3B	11	1	9.1%	1	100.0%	6	100	0	0.0%	0	0	0	0	0	0
Ivanoff Bay Village	3B	8	4	50.0%	2	50.0%	2	60	2	50.0%	6	350	1	6	0	0
Native Village of Belkofski	3B	5														
Native Village of Chignik	3B	7	7	100.0%	1	14.3%	5	110	0	0.0%	0	0	0	0	0	0
Native Village of Chignik Lagoon	3B	20	9	45.0%	5	55.6%	41	1,100	1	11.1%	2	80	0	0	2	14
Native Village of False Pass	3B	1														
Native Village of Nelson Lagoon	3B	3														
Native Village of Perryville	3B	22	14	63.6%	8	57.1%	71	2,025	1	7.1%	1	30	0	0	1	4
Native Village of Unga	3B	8	3	37.5%	1	33.3%	2	50	2	66.7%	2	160	0	0	0	0
Pauloff Harbor Village	3B	48	14	29.2%	6	42.9%	90	1,310	3	21.4%	14	415	0	0	0	0
Qagan Toyagungin Tribe of Sand Point Village	3B	86	46	53.5%	17	37.0%	104	2,450	1	2.2%	1	20	2	3	5	34
Subtotal, Area 3B		**291**	**141**	**48.5%**	**62**	**44.0%**	**545**	**11,692**	**17**	**12.1%**	**58**	**2,085**	**4**	**39**	**9**	**72**
Native Village of Akutan	4A	21	7	33.3%	3	42.9%	30	790	1	14.3%	3	40	1	5	2	30
Qawalingin Tribe of Unalaska	4A	36	13	36.1%	7	53.8%	37	680	2	15.4%	2	20	0	0	2	12
Subtotal, Area 4A		**57**	**20**	**35.1%**	**10**	**50.0%**	**67**	**1,470**	**3**	**15.0%**	**5**	**60**	**1**	**5**	**4**	**42**
Native Village of Atka	4B	5														
Subtotal, Area 4B		**5**														
Pribilof Islands Aleut Community of St. George	4C	6	4	66.7%	4	100.0%	20	686	0	0.0%	0	0	1	3	2	33
Pribilof Islands Aleut Community of St. Paul	4C	42	13	31.0%	6	46.2%	150	4,425	0	0.0%	0	0	0	0	0	0

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Table E-1.–Page 4 of 12.

Tribal name	Regulatory area	Return rate: SHARCs issued[a]	Return rate: Surveys returned	Return rate: Percent returned	Subsistence fished: Number respondents	Subsistence fished: Percent respondents	Subsistence harvest: Number halibut	Subsistence harvest: Pounds halibut[b]	Sport fished: Number respondents	Sport fished: Percent respondents	Sport harvest: Number halibut	Sport harvest: Pounds halibut[b]	Lingcod bycatch: Number respondents	Lingcod bycatch: Number lingcod	Rockfish bycatch: Number respondents	Rockfish bycatch: Number rockfish
Subtotal, Area 4C		**48**	**17**	**35.4%**	**10**	**58.8%**	**170**	**5,111**	**0**	**0.0%**	**0**	**0**	**1**	**3**	**2**	**33**
Native Village of Diomede (Inalik)	4D	1														
Native Village of Gambell	4D	1														
Native Village of Savoonga	4D	18	10	55.6%	3	30.0%	22	323	0	0.0%	0	0	1	8	1	9
Subtotal, Area 4D		**20**	**11**	**55.0%**	**4**	**36.4%**	**22**	**323**	**0**	**0.0%**	**0**	**0**	**1**	**8**	**1**	**9**
Chevak Native Village (Kashunamiut)	4E	3														
Chinik Eskimo Community	4E	1														
Egegik Village	4E	1														
King Island Native Community	4E	1														
Levelock Village	4E	1														
Manokotak Village	4E	1														
Naknek Native Village	4E	8	1	12.5%	0	0.0%	0	0	0	0.0%	0	0	0	0	0	0
Native Village of Aleknagik	4E	6	3	50.0%	0	0.0%	0	0	0	0.0%	0	0	0	0	0	0
Native Village of Brevig Mission	4E	1														
Native Village of Council	4E	4														
Native Village of Dillingham (Curyung)	4E	16	7	43.8%	1	14.3%	2	300	2	28.6%	6	179	0	0	0	0
Native Village of Eek	4E	7	3	42.9%	3	100.0%	16	640	0	0.0%	0	0	0	0	0	0
Native Village of Goodnews Bay (Mumtraq)	4E	4	2													
Native Village of Hooper Bay	4E	16	6	37.5%	2	33.3%	12	185	0	0.0%	0	0	0	0	0	0
Native Village of Kanakanak	4E	1														
Native Village of Kipnuk	4E	13	2	15.4%	2	100.0%	42	490	0	0.0%	0	0	0	0	0	0

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Table E-1.–Page 5 of 12.

		Return rate			Subsistence fished		Subsistence harvest		Sport fished		Sport harvest		Lingcod bycatch		Rockfish bycatch	
Tribal name	Regulatory area	SHARCs issued[a]	Surveys returned	Percent returned	Number respondents	Percent respondents	Number halibut	Pounds halibut[b]	Number respondents	Percent respondents	Number halibut	Pounds halibut[b]	Number respondents	Number lingcod	Number respondents	Number rockfish
Native Village of Kongiganak	4E	5														
Native Village of Koyuk	4E	1														
Native Village of Kwigillingok	4E	4														
Native Village of Kwinhagak	4E	3														
Native Village of Mekoryuk	4E	6	3	50.0%	2	66.7%	26	410	1	33.3%	6	150	0	0	0	0
Native Village of Nightmute	4E	1														
Native Village of Scammon Bay	4E	3														
Native Village of Shaktoolik	4E	1														
Native Village of Toksook Bay (Nunakauyak)	4E	33	12	36.4%	10	83.3%	105	1,250	0	0.0%	0	0	0	0	0	0
Native Village of Tununak	4E	13	3	23.1%	2	66.7%	21	190	0	0.0%	0	0	0	0	0	0
Native Village of Unalakleet	4E	3														
Native Village of Wales	4E	1														
Newtok Village	4E	1														
Nome Eskimo Community	4E	15	8	53.3%	2	25.0%	14	480	1	12.5%	10	200	1	4	2	3
Orutsararmuit Native Village	4E	9	3	33.3%	1	33.3%	18	230	1	33.3%	8	90	0	0	0	0
South Naknek Village	4E	1														
Stebbins Community Association	4E	4														
Traditional Village of Togiak	4E	3														
Twin Hills Village	4E	1														
Ugashik Village	4E	2														
Village of Chefornak	4E	14	6	42.9%	3	50.0%	29	371	0	0.0%	0	0	1	1	1	9

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Table E-1.–Page 6 of 12.

Tribal name	Regulatory area	Return rate: SHARCs issued[a]	Return rate: Surveys returned	Return rate: Percent returned	Subsistence fished: Number respondents	Subsistence fished: Percent respondents	Subsistence harvest: Number halibut	Subsistence harvest: Pounds halibut[b]	Sport fished: Number respondents	Sport fished: Percent respondents	Sport harvest: Number halibut	Sport harvest: Pounds halibut[b]	Lingcod bycatch: Number respondents	Lingcod bycatch: Number lingcod	Rockfish bycatch: Number respondents	Rockfish bycatch: Number rockfish
Village of Clark's Point	4E	1														
Village of Kotlik	4E	1														
Subtotal, Area 4E		**210**	**77**	**36.7%**	**33**	**42.9%**	**369**	**6,936**	**9**	**11.7%**	**51**	**1,059**	**2**	**5**	**3**	**12**
Tribal name subtotals		**3,906**	**2,025**	**51.8%**	**807**	**39.9%**	**9,142**	**240,151**	**280**	**13.8%**	**1,896**	**27,979**	**108**	**551**	**210**	**2,680**
Rural																
Angoon	2C	16	16	100.0%	9	56.3%	285	8,078	4	25.0%	11	200	1	12	4	118
Coffman Cove	2C	49	41	83.7%	20	48.8%	109	2,918	16	39.0%	104	1,652	3	13	7	55
Craig	2C	376	238	63.3%	117	49.2%	962	23,249	81	34.0%	347	6,207	30	70	58	441
Edna Bay	2C	37	24	64.9%	17	70.8%	78	2,161	0	0.0%	0	0	3	12	9	68
Elfin Cove	2C	15	11	73.3%	5	45.5%	19	680	2	18.2%	7	300	1	10	4	40
Gustavus	2C	61	45	73.8%	21	46.7%	94	2,655	15	33.3%	89	2,041	0	0	0	0
Haines	2C	426	309	72.5%	190	61.5%	818	23,538	68	22.0%	111	3,058	11	34	14	83
Hollis	2C	44	35	79.5%	17	48.6%	99	5,720	5	14.3%	9	170	0	0	4	9
Hoonah	2C	99	80	80.8%	35	43.8%	307	6,513	15	18.8%	93	1,900	0	0	3	15
Hydaburg	2C	10	8	80.0%	5	62.5%	43	1,970	3	37.5%	7	375	1	5	2	13
Hyder	2C	32	24	75.0%	14	58.3%	51	1,640	6	25.0%	4	100	2	8	3	35
Juneau	2C	3														
Kake	2C	35	27	77.1%	14	51.9%	140	6,173	6	22.2%	27	1,143	1	3	6	59
Kasaan	2C	8	4	50.0%	2	50.0%	2	90	0	0.0%	0	0	0	0	0	0
Ketchikan	2C	5														
Klawock	2C	155	102	65.8%	46	45.1%	417	9,359	32	31.4%	160	3,048	20	53	28	251
Klukwan	2C	2														
Meyers Chuck	2C	9	9	100.0%	7	77.8%	34	1,638	0	0.0%	0	0	0	0	3	18
Metlakatla	2C	32	21	65.6%	8	38.1%	69	2,292	5	23.8%	17	382	2	5	1	2
Naukati Bay	2C	40	30	75.0%	18	60.0%	41	1,708	12	40.0%	57	2,070	0	0	8	22
Pelican	2C	40	27	67.5%	16	59.3%	87	2,409	7	25.9%	6	185	6	9	11	105
Petersburg	2C	875	623	71.2%	278	44.6%	1,895	45,865	172	27.6%	561	12,801	4	6	38	185
Port Alexander	2C	26	15	57.7%	12	80.0%	84	3,230	3	20.0%	4	200	5	18	6	72
Port Protection	2C	16	11	68.8%	8	72.7%	78	2,155	2	18.2%	0	0	4	7	7	68
Pt. Baker	2C	15	11	73.3%	7	63.6%	25	963	1	9.1%	1	25	1	1	3	33
Saxman	2C	11	6	54.5%	2	33.3%	170	1,850	1	16.7%	15	200	2	20	2	70
Sitka	2C	1,363	872	64.0%	414	47.5%	2,228	64,054	141	16.2%	336	8,419	151	530	201	1,587

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Table E-1.–Page 7 of 12.

		Return rate			Subsistence fished		Subsistence harvest		Sport fished		Sport harvest		Lingcod bycatch		Rockfish bycatch	
Tribal name	Regulatory area	SHARCs issued[a]	Surveys returned	Percent returned	Number respondents	Percent respondents	Number halibut	Pounds halibut[b]	Number respondents	Percent respondents	Number halibut	Pounds halibut[b]	Number respondents	Number lingcod	Number respondents	Number rockfish
Skagway	2C	51	36	70.6%	25	69.4%	62	1,821	9	25.0%	27	935	0	0	0	0
Tenakee Springs	2C	53	46	86.8%	23	50.0%	122	3,363	13	28.3%	33	633	0	0	6	25
Thorne Bay	2C	119	90	75.6%	59	65.6%	372	13,193	28	31.1%	221	4,465	7	11	22	138
Ward Cove	2C	2														
Whale Pass	2C	18	18	100.0%	10	55.6%	12	515	9	50.0%	11	445	0	0	2	23
Wrangell	2C	377	274	72.7%	148	54.0%	1,023	28,139	67	24.5%	142	4,238	5	26	20	135
Subtotal, Area 2C		**4,420**	**3,062**	**69.3%**	**1,552**	**50.7%**	**9,762**	**268,757**	**724**	**23.6%**	**2,400**	**55,192**	**260**	**853**	**475**	**3,686**
Chenega Bay	3A	7	7	100.0%	5	71.4%	57	1,180	4	57.1%	46	860	1	2	3	28
Chiniak	3A	3														
Cordova	3A	498	349	70.1%	154	44.1%	930	25,024	73	20.9%	180	5,030	11	20	29	137
Karluk	3A	6	6	100.0%	5	83.3%	36	595	0	0.0%	0	0	1	2	4	48
Kodiak	3A	1,552	848	54.6%	469	55.3%	4,456	120,357	285	33.6%	1,327	34,719	54	185	96	1,128
Larsen Bay	3A	6	3	50.0%	0	0.0%	0	0	0	0.0%	0	0	0	0	0	0
Nanwalek	3A	7	4	57.1%	3	75.0%	232	5,340	1	25.0%	1	20	0	0	1	20
Old Harbor	3A	7	4	57.1%	4	100.0%	82	1,960	0	0.0%	0	0	1	5	1	5
Ouzinkie	3A	13	9	69.2%	9	100.0%	50	1,215	4	44.4%	9	180	0	0	1	20
Port Graham	3A	10	6	60.0%	5	83.3%	86	1,985	0	0.0%	0	0	2	13	3	31
Port Lions	3A	11	8	72.7%	7	87.5%	65	1,387	8	100.0%	70	1,380	2	30	1	17
Seldovia	3A	144	108	75.0%	62	57.4%	802	16,121	26	24.1%	150	3,117	5	21	6	31
Tatitlek	3A	10	6	60.0%	3	50.0%	18	545	1	16.7%	4	85	2	11	2	27
Yakutat	3A	74	53	71.6%	24	45.3%	225	8,558	9	17.0%	44	1,108	13	47	7	107
Subtotal, Area 3A		**2,348**	**1,414**	**60.2%**	**753**	**53.3%**	**7,069**	**184,947**	**411**	**29.1%**	**1,831**	**46,499**	**92**	**336**	**154**	**1,599**
Chignik	3B	1														
Chignik Lagoon	3B	1														
Chignik Lake	3B	1														
Cold Bay	3B	32	27	84.4%	15	55.6%	147	3,685	13	48.1%	21	428	2	35	3	10
False Pass	3B	1														
King Cove	3B	25	15	60.0%	10	66.7%	67	1,924	3	20.0%	2	40	2	3	2	10
Nelson Lagoon	3B	1														
Perryville	3B	1														
Sand Point	3B	15	6	40.0%	3	50.0%	26	630	2	33.3%	5	105	0	0	2	38
Subtotal, Area 3B		**78**	**50**	**64.1%**	**29**	**58.0%**	**246**	**6,439**	**18**	**36.0%**	**28**	**573**	**4**	**38**	**7**	**58**

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Table E-1.–Page 8 of 12.

		Return rate			Subsistence fished		Subsistence harvest		Sport fished		Sport harvest		Lingcod bycatch		Rockfish bycatch	
Tribal name	Regulatory area	SHARCs issued[a]	Surveys returned	Percent returned	Number respondents	Percent respondents	Number halibut	Pounds halibut[b]	Number respondents	Percent respondents	Number halibut	Pounds halibut[b]	Number respondents	Number lingcod	Number respondents	Number rockfish
Unalaska	4A	119	76	63.9%	47	61.8%	479	11,780	30	39.5%	141	2,660	3	32	5	205
Subtotal, Area 4A		**119**	**76**	**63.9%**	**47**	**61.8%**	**479**	**11,780**	**30**	**39.5%**	**141**	**2,660**	**3**	**32**	**5**	**205**
Adak	4B	5														
Subtotal, Area 4B		**5**														
St. George Island	4C	1														
Subtotal, Area 4C		**1**														
Aleknagik	4E	2														
Bethel	4E	1														
Chefornak	4E	1														
Dillingham	4E	23	17	73.9%	1	5.9%	0	0	1	5.9%	2	150	0	0	0	0
Egegik	4E	1														
King Salmon	4E	2														
Kongiganak	4E	1														
Manokotak	4E	2														
Naknek	4E	6	2	33.3%	1	50.0%	0	0	0	0.0%	0	0	0	0	0	0
Nightmute	4E	1														
Nome	4E	20	11	55.0%	4	36.4%	30	641	0	0.0%	0	0	0	0	0	0
Port Heiden	4E	3														
Quinhagak	4E	1														
South Naknek	4E	1														
Teller	4E	10	2	20.0%	0	0.0%	0	0	0	0.0%	0	0	0	0	0	0
Togiak	4E	1														
Subtotal, Area 4E		**76**	**40**	**52.6%**	**8**	**20.0%**	**40**	**770**	**1**	**2.5%**	**2**	**150**	**0**	**0**	**0**	**0**
Rural community subtotals		**7,047**	**4,645**	**65.9%**	**2,391**	**51.5%**	**17,607**	**472,843**	**1,184**	**25.5%**	**4,402**	**105,074**	**359**	**1,259**	**641**	**5,548**
Total (tribal and rural)		**10,953**	**6,670**	**60.9%**	**3,198**	**47.9%**	**26,749**	**712,994**	**1,464**	**21.9%**	**6,298**	**133,053**	**467**	**1,810**	**851**	**8,228**

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Table E-1.–Page 9 of 12.

		Return rate			Subsistence fished		Subsistence harvest		Sport fished		Sport harvest		Lingcod bycatch		Rockfish bycatch	
Community name	Regulatory area	SHARCs issued[a]	Surveys returned	Percent returned	Number respondents	Percent respondents	Number halibut	Pounds halibut[b]	Number respondents	Percent respondents	Number halibut	Pounds halibut[b]	Number respondents	Number lingcod	Number respondents	Number rockfish
Adak	AK	8	4	50.0%	3	75.0%	18	407	0	0.0%	0	0	0	0	0	0
Akhiok	AK	6	1	16.7%	1	100.0%	8	320	0	0.0%	0	0	0	0	0	0
Akiachak	AK	1														
Akutan	AK	16	4	25.0%	3	75.0%	30	790	0	0.0%	0	0	1	5	2	30
Aleknagik	AK	3														
Anchor Point	AK	12	6	50.0%	1	16.7%	10	150	2	33.3%	5	200	0	0	0	0
Anchorage	AK	219	102	46.6%	27	26.5%	349	14,764	22	21.6%	88	2,297	6	33	6	255
Angoon	AK	109	96	88.1%	47	49.0%	718	18,751	14	14.6%	63	1,770	2	17	16	219
Atka	AK	1														
Auke Bay	AK	5														
Barrow	AK	1														
Bethel	AK	8	1	12.5%	1	100.0%	14	560	0	0.0%	0	0	0	0	0	0
Chefornak	AK	14	6	42.9%	3	50.0%	29	371	0	0.0%	0	0	1	1	1	9
Chenega Bay	AK	8	8	100.0%	6	75.0%	72	3,440	4	50.0%	41	860	2	3	4	54
Chevak	AK	2														
Chignik	AK	10	8	80.0%	2	25.0%	15	560	0	0.0%	0	0	0	0	0	0
Chignik Lagoon	AK	13	4	30.8%	3	75.0%	29	770	0	0.0%	0	0	0	0	2	14
Chignik Lake	AK	4														
Chiniak	AK	18	11	61.1%	9	81.8%	110	2,430	2	18.2%	3	90	0	0	0	0
Chugiak	AK	3														
Clarks Point	AK	1														
Coffman Cove	AK	46	38	82.6%	19	50.0%	103	2,678	13	34.2%	73	1,302	3	13	7	55
Cold Bay	AK	35	30	85.7%	17	56.7%	158	3,760	13	43.3%	21	428	2	35	3	10
Cordova	AK	557	381	68.4%	167	43.8%	1,108	28,339	77	20.2%	174	5,765	13	23	33	168
Craig	AK	510	326	63.9%	166	50.9%	1,333	35,041	95	29.1%	359	6,442	35	83	79	537
Dillingham	AK	30	19	63.3%	1	5.3%	0	0	1	5.3%	2	150	0	0	0	0
Douglas	AK	17	4	23.5%	1	25.0%	22	80	1	25.0%	8	30	0	0	0	0
Dutch Harbor	AK	80	48	60.0%	28	58.3%	335	8,921	23	47.9%	122	2,307	1	26	2	191
Eagle River	AK	8	6	75.0%	3	50.0%	37	580	1	16.7%	8	90	0	0	0	0
Edna Bay	AK	28	18	64.3%	13	72.2%	60	1,661	0	0.0%	0	0	2	4	6	34
Eek	AK	6	2	33.3%	2	100.0%	2	80	0	0.0%	0	0	0	0	0	0
Egegik	AK	1														
Elfin Cove	AK	14	10	71.4%	5	50.0%	19	680	2	20.0%	7	300	1	10	4	40

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Table E-1.–Page 10 of 12.

		Return rate			Subsistence fished		Subsistence harvest		Sport fished		Sport harvest		Lingcod bycatch		Rockfish bycatch	
Community name	Regulatory area	SHARCs issued[a]	Surveys returned	Percent returned	Number respondents	Percent respondents	Number halibut	Pounds halibut[b]	Number respondents	Percent respondents	Number halibut	Pounds halibut[b]	Number respondents	Number lingcod	Number respondents	Number rockfish
Elmendorf AFB	AK	1														
Ester	AK	1														
Fairbanks	AK	7	4	57.1%	1	25.0%	4	140	0	0.0%	0	0	0	0	0	0
False Pass	AK	1														
Fritz Creek	AK	1														
Gakona	AK	1														
Gambell	AK	1														
Girdwood	AK	1														
Glennallen	AK	1														
Golovin	AK	1														
Goodnews Bay	AK	4														
Gustavus	AK	58	43	74.1%	20	46.5%	87	2,475	13	30.2%	71	1,683	0	0	0	0
Haines	AK	473	334	70.6%	199	59.6%	902	25,562	59	17.7%	66	1,770	11	34	14	83
Hollis	AK	1														
Homer	AK	25	14	56.0%	7	50.0%	125	1,922	4	28.6%	19	205	1	2	1	4
Hoonah	AK	236	144	61.0%	60	41.7%	550	13,853	19	13.2%	98	2,030	0	0	4	20
Hooper Bay	AK	14	6	42.9%	2	33.3%	12	185	0	0.0%	0	0	0	0	0	0
Hydaburg	AK	120	116	96.7%	60	51.7%	495	27,180	8	6.9%	16	750	15	55	29	521
Hyder	AK	31	24	77.4%	14	58.3%	51	1,640	6	25.0%	4	100	2	8	3	35
Juneau	AK	349	117	33.5%	44	37.6%	468	10,611	26	22.2%	128	3,170	1	2	8	26
Kake	AK	110	83	75.5%	32	38.6%	335	11,660	7	8.4%	18	923	3	29	10	86
Karluk	AK	9	6	66.7%	5	83.3%	36	595	0	0.0%	0	0	1	2	4	48
Kasaan	AK	15	5	33.3%	1	20.0%	1	21	1	20.0%	0	0	0	0	1	6
Kasilof	AK	13	8	61.5%	6	75.0%	124	2,065	2	25.0%	23	300	2	12	1	15
Kenai	AK	108	54	50.0%	10	18.5%	138	5,453	12	22.2%	38	1,129	1	4	0	0
Ketchikan	AK	571	385	67.4%	123	31.9%	1,333	36,437	88	22.9%	332	9,090	15	69	44	297
King Cove	AK	87	42	48.3%	27	64.3%	268	6,004	8	19.0%	22	830	3	33	3	30
King Salmon	AK	2														
Kipnuk	AK	12	2	16.7%	2	100.0%	42	490	0	0.0%	0	0	0	0	0	0
Klawock	AK	237	127	53.6%	55	43.3%	501	15,613	29	22.8%	155	3,123	18	62	28	320
Klukwan	AK	2														
Kodiak	AK	1,702	911	53.5%	499	54.8%	4,649	127,954	294	32.3%	1,387	37,077	59	213	104	1,231
Kongiganak	AK	6	3	50.0%	1	33.3%	4	150	0	0.0%	0	0	0	0	0	0

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Table E-1.–Page 11 of 12.

		Return rate			Subsistence fished		Subsistence harvest		Sport fished		Sport harvest		Lingcod bycatch		Rockfish bycatch	
Community name	Regulatory area	SHARCs issued[a]	Surveys returned	Percent returned	Number respondents	Percent respondents	Number halibut	Pounds halibut[b]	Number respondents	Percent respondents	Number halibut	Pounds halibut[b]	Number respondents	Number lingcod	Number respondents	Number rockfish
Kotzebue	AK	1														
Kwigillingok	AK	3														
Larsen Bay	AK	33	19	57.6%	13	68.4%	96	2,617	6	31.6%	36	1,355	3	22	3	24
Manokotak	AK	2														
Mekoryuk	AK	5														
Metlakatla	AK	193	89	46.1%	31	34.8%	337	10,772	11	12.4%	23	499	12	53	12	151
Meyers Chuck	AK	8	8	100.0%	7	87.5%	34	1,638	0	0.0%	0	0	0	0	3	18
Naknek	AK	9	3	33.3%	1	33.3%	0	0	0	0.0%	0	0	0	0	0	0
Nanwalek	AK	48	21	43.8%	20	95.2%	567	12,865	2	9.5%	5	75	4	33	4	130
Naukati	AK	25	20	80.0%	11	55.0%	92	2,358	6	30.0%	28	450	1	8	6	97
Nelson Lagoon	AK	1														
Newtok	AK	1														
Nightmute	AK	2														
Nikiski	AK	9	2	22.2%	0	0.0%	0	0	1	50.0%	4	65	0	0	0	0
Ninilchik	AK	38	19	50.0%	3	15.8%	99	2,974	7	36.8%	25	475	0	0	0	0
Nome	AK	23	14	60.9%	6	42.9%	40	941	0	0.0%	0	0	1	4	1	1
North Pole	AK	4														
Old Harbor	AK	41	20	48.8%	13	65.0%	139	3,583	2	10.0%	6	112	2	6	3	35
Ouzinkie	AK	47	25	53.2%	17	68.0%	109	2,724	9	36.0%	24	569	1	1	2	40
Palmer	AK	10	3	30.0%	1	33.3%	1	24	0	0.0%	0	0	0	0	0	0
Pelican	AK	45	31	68.9%	19	61.3%	127	3,589	8	25.8%	6	185	8	25	13	179
Perryville	AK	18	12	66.7%	7	58.3%	68	1,945	1	8.3%	1	30	0	0	1	4
Petersburg	AK	961	676	70.3%	291	43.0%	2,021	48,357	180	26.6%	579	13,217	4	6	37	175
Pilot Point	AK	2														
Point Baker	AK	20	15	75.0%	11	73.3%	60	1,893	1	6.7%	1	25	3	6	7	81
Port Alexander	AK	28	17	60.7%	14	82.4%	119	4,380	3	17.6%	4	200	5	18	6	72
Port Graham	AK	47	29	61.7%	18	62.1%	318	5,271	3	10.3%	13	195	3	14	6	84
Port Heiden	AK	2														
Port Lions	AK	39	27	69.2%	19	70.4%	181	3,986	16	59.3%	113	2,720	4	52	3	47
Port Protection	AK	2														
Port William	AK	1														
Quinhagak	AK	5														
Sand Point	AK	130	61	46.9%	26	42.6%	213	4,220	7	11.5%	20	540	1	1	6	66

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Table E-1.–Page 12 of 12.

		Return rate			Subsistence fished		Subsistence harvest		Sport fished		Sport harvest		Lingcod bycatch		Rockfish bycatch	
Community name	Regulatory area	SHARCs issued[a]	Surveys returned	Percent returned	Number respondents	Percent respondents	Number halibut	Pounds halibut[b]	Number respondents	Percent respondents	Number halibut	Pounds halibut[b]	Number respondents	Number lingcod	Number respondents	Number rockfish
Savoonga	AK	17	9	52.9%	3	33.3%	22	323	0	0.0%	0	0	1	8	1	9
Saxman	AK	12	1	8.3%	0	0.0%	0	0	0	0.0%	0	0	0	0	0	0
Seldovia	AK	152	105	69.1%	65	61.9%	846	18,746	23	21.9%	127	2,682	5	21	7	33
Seward	AK	12	3	25.0%	1	33.3%	5	200	0	0.0%	0	0	0	0	1	10
Sitka	AK	1,635	1,014	62.0%	480	47.3%	2,532	73,139	143	14.1%	336	8,234	168	600	226	1,801
Skagway	AK	56	41	73.2%	28	68.3%	74	2,066	9	22.0%	27	935	0	0	0	0
Soldotna	AK	44	25	56.8%	7	28.0%	904	2,794	4	16.0%	12	320	0	0	0	0
St. George Island	AK	4														
St. Paul Island	AK	41	12	29.3%	6	50.0%	150	4,425	0	0.0%	0	0	0	0	0	0
Sterling	AK	4														
Tatitlek	AK	15	8	53.3%	6	75.0%	76	1,525	0	0.0%	0	0	3	14	4	35
Teller	AK	10	2	20.0%	0	0.0%	0	0	0	0.0%	0	0	0	0	0	0
Tenakee Springs	AK	53	46	86.8%	23	50.0%	122	3,363	13	28.3%	33	633	0	0	6	25
Thorne Bay	AK	114	89	78.1%	60	67.4%	374	13,283	30	33.7%	219	4,430	7	11	22	138
Togiak	AK	4														
Toksook Bay	AK	32	12	37.5%	10	83.3%	105	1,250	0	0.0%	0	0	0	0	0	0
Trapper Creek	AK	1														
Tununak	AK	11	3	27.3%	2	66.7%	21	190	0	0.0%	0	0	0	0	0	0
Twin Hills	AK	2														
Unalakleet	AK	1														
Unalaska	AK	75	43	57.3%	27	62.8%	188	3,689	10	23.3%	22	403	2	6	5	26
Valdez	AK	38	21	55.3%	6	28.6%	42	1,750	3	14.3%	12	385	3	4	4	15
Ward Cove	AK	32	14	43.8%	4	28.6%	18	927	3	21.4%	4	185	0	0	3	19
Wasilla	AK	43	16	37.2%	2	12.5%	14	80	1	6.3%	0	0	0	0	0	0
Whale Pass	AK	8	8	100.0%	6	75.0%	6	235	2	25.0%	2	80	0	0	0	0
Whittier	AK	2														
Willow	AK	2														
Wrangell	AK	476	339	71.2%	182	53.7%	1,289	35,208	80	23.6%	175	5,038	6	27	25	175
Yakutat	AK	110	73	66.4%	34	46.6%	403	14,337	9	12.3%	44	1,108	18	89	10	340
Alaska subtotal	**All**	**10,804**	**6,595**	**61.0%**	**3,194**	**48.4%**	**26,740**	**712,596**	**1,442**	**21.9%**	**5,256**	**129,426**	**467**	**1,810**	**850**	**8,223**
Non-Alaska subtotal	**All**	**149**	**75**	**50.3%**	**4**	**5.3%**	**9**	**398**	**22**	**29.3%**	**142**	**3,567**	**0**	**0**	**1**	**5**
Total	**All**	**10,953**	**6,670**	**60.9%**	**3,198**	**47.9%**	**26,749**	**712,994**	**1,464**	**21.9%**	**5,398**	**132,993**	**467**	**1,810**	**851**	**8,228**

a. To protect confidentiality, data for tribes and communities with 5 or fewer SHARCs issued are not reported in this table. Subtotals include all tribes and communities. Blank cells indicate redacted data.

b. Pounds of halibut are reported in round weight.

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Appendix E-2.–Harvests by return category.

Tribal name	Regulatory area	First mailing response					Second mailing response					Third mailing response					Staff administered				
		Number returned[a]	Number subsistence fished	Number of halibut harvested	Mean, all returned	Mean, those who fished	Number returned	Number subsistence fished	Number of halibut harvested	Mean, all returned	Mean, those who fished	Number returned	Number subsistence fished	Number of halibut harvested	Mean, all returned	Mean, those who fished	Number returned	Number subsistence fished	Number of halibut harvested	Mean, all returned	Mean, those who fished
Angoon Community Association	2C	20	12	94	4.7	7.8	2	1	12	6.0	12.0	0	0	0	0.0	0.0	51	22	322	6.3	14.6
Aukquan Traditional Council	2C																				
Central Council Tlingit and Haida Indian Tribes	2C	158	64	776	4.9	12.1	46	13	105	2.3	8.1	0	0	0	0.0	0.0	11	3	13	1.2	4.3
Chilkat Indian Village	2C	15	3	37	2.5	12.3	2	1	4	2.0	4.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Chilkoot Indian Association	2C	18	8	33	1.8	4.1	3	1	18	6.0	18.0	0	0	0	0.0	0.0	1	1	1	1.0	1.0
Craig Community Association	2C	27	11	122	4.5	11.1	5	2	30	6.0	15.0	0	0	0	0.0	0.0	1	0	0	0.0	0.0
Douglas Indian Association	2C	1	0	0	0.0	0.0	2	0	0	0.0	0.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Hoonah Indian Association	2C	52	19	222	4.3	11.7	15	5	27	1.8	5.4	0	0	0	0.0	0.0	1	1	0	0.0	0.0
Hydaburg Cooperative Association	2C	27	12	80	3.0	6.7	0	0	0	0.0	0.0	0	0	0	0.0	0.0	81	43	372	4.6	8.7
Ketchikan Indian Corporation	2C	140	39	466	3.3	11.9	16	3	10	0.6	3.3	0	0	0	0.0	0.0	163	45	483	3.0	10.7
Klawock Cooperative Association	2C	24	8	41	1.7	5.1	7	3	28	4.0	9.3	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Metlakatla Indian Community, Annette Island Reserve	2C	49	16	139	2.8	8.7	24	7	129	5.4	18.4	0	0	0	0.0	0.0	3	0	0	0.0	0.0
Organized Village of Kake	2C	41	13	98	2.4	7.5	13	5	67	5.2	13.4	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Organized Village of Kasaan	2C	3	2	8	2.7	4.0	1	0	0	0.0	0.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Organized Village of Saxman	2C	5	4	48	9.6	12.0	1	1	2	2.0	2.0	0	0	0	0.0	0.0	12	6	70	5.8	11.7
Petersburg Indian Association	2C	33	14	127	3.8	9.1	6	1	5	0.8	5.0	0	0	0	0.0	0.0	1	0	0	0.0	0.0
Sitka Tribe of Alaska	2C	105	50	272	2.6	5.4	22	10	80	3.6	8.0	0	0	0	0.0	0.0	25	9	36	1.4	4.0
Skagway Village	2C																				
Wrangell Cooperative Association	2C	58	27	191	3.3	7.1	3	1	15	5.0	15.0	0	0	0	0.0	0.0	1	0	0	0.0	0.0
Subtotal, Area 2C		**779**	**303**	**2,756**	**3.5**	**9.1**	**168**	**54**	**532**	**3.2**	**9.9**	**0**	**0**	**0**	**0.0**	**0.0**	**351**	**130**	**1,297**	**3.7**	**10.0**
Kenaitze Indian Tribe	3A	51	11	145	2.8	13.2	10	3	28	2.8	9.3	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Lesnoi Village (Woody Island)	3A	35	4	28	0.8	7.0	4	0	0	0.0	0.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Native Village of Afognak	3A	11	8	57	5.2	7.1	3	1	8	2.7	8.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0

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Table E-2.–Page 2 of 12.

Tribal name	Regulatory area	First mailing response					Second mailing response					Third mailing response					Staff administered				
		Number returned[a]	Number subsistence fished	Number of halibut harvested	Mean, all returned	Mean, those who fished	Number returned	Number subsistence fished	Number of halibut harvested	Mean, all returned	Mean, those who fished	Number returned	Number subsistence fished	Number of halibut harvested	Mean, all returned	Mean, those who fished	Number returned	Number subsistence fished	Number of halibut harvested	Mean, all returned	Mean, those who fished
Native Village of Akhiok	3A	1	1	5	5.0	5.0	1	1	8	8.0	8.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Native Village of Chenega	3A	8	4	58	7.3	14.5	0	0	0	0.0	0.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Native Village of Eyak	3A	32	14	169	5.3	12.1	9	2	19	2.1	9.5	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Native Village of Karluk	3A																				
Native Village of Larsen Bay	3A	16	12	103	6.4	8.6	4	3	38	9.5	12.7	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Native Village of Nanwalek	3A	12	12	237	19.8	19.8	6	6	100	16.7	16.7	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Native Village of Ouzinkie	3A	12	9	72	6.0	8.0	5	0	0	0.0	0.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Native Village of Port Graham	3A	12	7	266	22.2	38.0	13	7	76	5.8	10.9	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Native Village of Port Lions	3A	19	10	75	3.9	7.5	3	3	42	14.0	14.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Native Village of Tatitlek	3A	9	4	69	7.7	17.3	2	1	1	0.5	1.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Ninilchik Village	3A	32	9	959	30.0	106.6	8	1	12	1.5	12.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Seldovia Village Tribe	3A	33	16	241	7.3	15.1	2	1	23	11.5	23.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Sun'aq Tribe of Kodiak (formerly Shoonaq')	3A	40	24	232	5.8	9.7	8	1	2	0.3	2.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Village of Kanatak	3A	4	0	0	0.0	0.0	1	0	0	0.0	0.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Village of Old Harbor	3A	16	8	52	3.3	6.5	3	0	0	0.0	0.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Village of Salamatoff	3A	13	3	54	4.2	18.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Yakutat Tlingit Tribe	3A	14	8	182	13.0	22.8	7	3	16	2.3	5.3	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Subtotal, Area 3A		**370**	**164**	**3,004**	**8.1**	**18.3**	**89**	**33**	**373**	**4.2**	**11.3**	**0**	**0**	**0**	**0.0**	**0.0**	**0**	**0**	**0**	**0.0**	**0.0**
Agdaagux Tribe of King Cove	3B	28	16	214	7.6	13.4	10	5	10	1.0	2.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Chignik Lake Village	3B	1	1	6	6.0	6.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Ivanoff Bay Village	3B	4	2	2	0.5	1.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Native Village of Belkofski	3B																				
Native Village of Chignik	3B	7	1	5	0.7	5.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Native Village of Chignik Lagoon	3B	9	5	41	4.6	8.2	0	0	0	0.0	0.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Native Village of False Pass	3B																				

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Table E-2.–Page 3 of 12.

Tribal name	Regulatory area	First mailing response: Number returned[a]	Number subsistence fished	Number of halibut harvested	Mean, all returned	Mean, those who fished	Second mailing response: Number returned	Number subsistence fished	Number of halibut harvested	Mean, all returned	Mean, those who fished	Third mailing response: Number returned	Number subsistence fished	Number of halibut harvested	Mean, all returned	Mean, those who fished	Staff administered: Number returned	Number subsistence fished	Number of halibut harvested	Mean, all returned	Mean, those who fished
Native Village of Nelson Lagoon	3B																				
Native Village of Perryville	3B	11	8	71	6.5	8.9	3	0	0	0.0	0.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Native Village of Unga	3B	3	1	2	0.7	2.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Pauloff Harbor Village	3B	13	5	89	6.8	17.8	1	1	1	1.0	1.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Qagan Toyagungin Tribe of Sand Point Village	3B	34	14	82	2.4	5.9	12	3	22	1.8	7.3	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Subtotal, Area 3B		**114**	**53**	**512**	**4.5**	**9.7**	**27**	**9**	**33**	**1.2**	**3.7**	**0**	**0**	**0**	**0.0**	**0.0**	**0**	**0**	**0**	**0.0**	**0.0**
Native Village of Akutan	4A	5	2	19	3.8	9.5	2	1	11	5.5	11.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Qawalingin Tribe of Unalaska	4A	10	4	11	1.1	2.8	3	3	26	8.7	8.7	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Subtotal, Area 4A		**15**	**6**	**30**	**2.0**	**5.0**	**5**	**4**	**37**	**7.4**	**9.3**	**0**	**0**	**0**	**0.0**	**0.0**	**0**	**0**	**0**	**0.0**	**0.0**
Native Village of Atka	4B																				
Subtotal, Area 4B																					
Pribilof Islands Aleut Community of St George	4C	3	3	20	6.7	6.7	1	1	0	0.0	0.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Pribilof Islands Aleut Community of St Paul	4C	11	6	150	13.6	25.0	2	0	0	0.0	0.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Subtotal, Area 4C		**14**	**9**	**170**	**12.1**	**18.9**	**3**	**1**	**0**	**0.0**	**0.0**	**0**	**0**	**0**	**0.0**	**0.0**	**0**	**0**	**0**	**0.0**	**0.0**
Native Village of Diomede (Inalik)	4D																				
Native Village of Gambell	4D																				
Native Village of Savoonga	4D	8	3	22	2.8	7.3	2	0	0	0.0	0.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Subtotal, Area 4D		**9**	**4**	**22**	**2.4**	**5.5**	**2**	**0**	**0**	**0.0**	**0.0**	**0**	**0**	**0**	**0.0**	**0.0**	**0**	**0**	**0**	**0.0**	**0.0**
Chevak Native Village (Kashunamiut)	4E																				
Chinik Eskimo Community	4E																				
King Island Native Community	4E																				

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Table E-2.–Page 4 of 12.

Tribal name	Regulatory area	First mailing response					Second mailing response					Third mailing response					Staff administered				
		Number returned[a]	Number subsistence fished	Number of halibut harvested	Mean, all returned	Mean, those who fished	Number returned	Number subsistence fished	Number of halibut harvested	Mean, all returned	Mean, those who fished	Number returned	Number subsistence fished	Number of halibut harvested	Mean, all returned	Mean, those who fished	Number returned	Number subsistence fished	Number of halibut harvested	Mean, all returned	Mean, those who fished
Levelock Village	4E																				
Manokotak Village	4E																				
Naknek Native Village	4E	0	0	0	0.0	0.0	1	0	0	0.0	0.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Native Village of Aleknagik	4E	1	0	0	0.0	0.0	2	0	0	0.0	0.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Native Village of Brevig Mission	4E																				
Native Village of Council	4E																				
Native Village of Dillingham (Curyung)	4E	6	1	2	0.3	2.0	1	0	0	0.0	0.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Native Village of Eek	4E	3	3	16	5.3	5.3	0	0	0	0.0	0.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Native Village of Goodnews Bay (Mumtraq)	4E																				
Native Village of Hooper Bay	4E	6	2	12	2.0	6.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Native Village of Kanakanak	4E																				
Native Village of Kipnuk	4E	1	1	17	17.0	17.0	1	1	25	25.0	25.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Native Village of Kongiganak	4E																				
Native Village of Koyuk	4E																				
Native Village of Kwigillingok	4E																				
Native Village of Kwinhagak	4E																				
Native Village of Mekoryuk	4E	3	2	26	8.7	13.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Native Village of Nightmute	4E																				
Native Village of Scammon Bay	4E																				
Native Village of Shaktoolik	4E																				
Native Village of Toksook Bay (Nunakauyak)	4E	12	10	105	8.8	10.5	0	0	0	0.0	0.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Native Village of Tununak	4E	3	2	21	7.0	10.5	0	0	0	0.0	0.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Native Village of Unalakleet	4E																				

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Table E-2.–Page 5 of 12.

Tribal name	Regulatory area	First mailing response					Second mailing response					Third mailing response					Staff administered				
		Number returned[a]	Number subsistence fished	Number of halibut harvested	Mean, all returned	Mean, those who fished	Number returned	Number subsistence fished	Number of halibut harvested	Mean, all returned	Mean, those who fished	Number returned	Number subsistence fished	Number of halibut harvested	Mean, all returned	Mean, those who fished	Number returned	Number subsistence fished	Number of halibut harvested	Mean, all returned	Mean, those who fished
Native Village of Wales	4E																				
Newtok Village	4E																				
Nome Eskimo Community	4E	7	2	14	2.0	7.0	1	0	0	0.0	0.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Orutsararmuit Native Village	4E	3	1	18	6.0	18.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0
South Naknek Village	4E																				
Stebbins Community Association	4E																				
Traditional Village of Togiak	4E																				
Twin Hills Village	4E																				
Ugashik Village	4E																				
Village of Chefornak	4E	6	3	29	4.8	9.7	0	0	0	0.0	0.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Village of Clark's Point	4E																				
Village of Kotlik	4E																				
Subtotal, 4E		**68**	**32**	**344**	**5.1**	**10.8**	**8**	**1**	**25**	**3.1**	**25.0**	**0**	**0**	**0**	**0.0**	**0.0**	**1**	**0**	**0**	**0.0**	**0.0**
Tribal subtotals		1,371	572	6,845	5.0	12.0	302	102	1,000	3.3	9.8	0	0	0	0.0	0.0	352	130	1,297	3.7	10.0

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Table E-2.–Page 6 of 12.

Rural community	Regulatory area	First mailing response					Second mailing response					Third mailing response					Staff administered				
		Number returned[a]	Number subsistence fished	Number of halibut harvested	Mean, all returned	Mean, those who fished	Number returned	Number subsistence fished	Number of halibut harvested	Mean, all returned	Mean, those who fished	Number returned	Number subsistence fished	Number of halibut harvested	Mean, all returned	Mean, those who fished	Number returned	Number subsistence fished	Number of halibut harvested	Mean, all returned	Mean, those who fished
Angoon	2C	7	5	231	33.0	46.2	0	0	0	0.0	0.0	0	0	0	0.0	0.0	9	4	54	6.0	13.5
Coffman Cove	2C	27	13	77	2.9	5.9	14	7	32	2.3	4.6	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Craig	2C	188	95	796	4.2	8.4	48	22	166	3.5	7.5	0	0	0	0.0	0.0	2	0	0	0.0	0.0
Edna Bay	2C	18	14	62	3.4	4.4	5	3	16	3.2	5.3	0	0	0	0.0	0.0	1	0	0	0.0	0.0
Elfin Cove	2C	6	3	7	1.2	2.3	5	2	12	2.4	6.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Gustavus	2C	37	17	69	1.9	4.1	8	4	25	3.1	6.3	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Haines	2C	258	160	693	2.7	4.3	51	27	125	2.5	4.6	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Hollis	2C	32	14	67	2.1	4.8	3	3	32	10.7	10.7	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Hoonah	2C	67	32	284	4.2	8.9	13	2	8	0.6	4.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Hydaburg	2C	6	4	33	5.5	8.3	0	0	0	0.0	0.0	0	0	0	0.0	0.0	2	1	10	5.0	10.0
Hyder	2C	19	13	46	2.4	3.5	5	1	5	1.0	5.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Juneau	2C																				
Kake	2C	20	9	90	4.5	10.0	7	4	40	5.7	10.0	0	0	0	0.0	0.0	0	1	10	0.0	10.0
Kasaan	2C	2	0	0	0.0	0.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0	2	2	2	1.0	1.0
Ketchikan	2C																				
Klawock	2C	85	39	368	4.3	9.4	16	7	49	3.1	7.0	0	0	0	0.0	0.0	1	0	0	0.0	0.0
Klukwan	2C																				
Metlakatla	2C	19	7	57	3.0	8.1	2	1	12	6.0	12.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Meyers Chuck	2C	8	7	34	4.3	4.9	1	0	0	0.0	0.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Naukati Bay	2C	24	18	41	1.7	2.3	2	0	0	0.0	0.0	0	0	0	0.0	0.0	4	0	0	0.0	0.0
Pelican	2C	20	10	38	1.9	3.8	7	6	49	7.0	8.2	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Petersburg	2C	516	247	1,660	3.2	6.7	107	30	235	2.2	7.8	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Port Alexander	2C	14	12	84	6.0	7.0	1	0	0	0.0	0.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Port Protection	2C	5	4	29	5.8	7.3	5	4	49	9.8	12.3	0	0	0	0.0	0.0	1	0	0	0.0	0.0
Pt. Baker	2C	5	3	10	2.0	3.3	6	4	15	2.5	3.8	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Saxman	2C	6	2	170	28.3	85.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Sitka	2C	698	351	1,919	2.7	5.5	114	44	223	2.0	5.1	0	0	0	0.0	0.0	60	15	86	1.4	5.7
Skagway	2C	32	24	60	1.9	2.5	4	1	2	0.5	2.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Tenakee Springs	2C	39	21	114	2.9	5.4	7	2	8	1.1	4.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Thorne Bay	2C	74	52	350	4.7	6.7	16	7	22	1.4	3.1	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Ward Cove	2C																				
Whale Pass	2C	16	9	12	0.8	1.3	2	1	0	0.0	0.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0

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Table .–Page 7 of 12.

Rural community	Regulatory area	First mailing response: Number returned[a]	Number subsistence fished	Number of halibut harvested	Mean, all returned	Mean, those who fished	Second mailing response: Number returned	Number subsistence fished	Number of halibut harvested	Mean, all returned	Mean, those who fished	Third mailing response: Number returned	Number subsistence fished	Number of halibut harvested	Mean, all returned	Mean, those who fished	Staff administered: Number returned	Number subsistence fished	Number of halibut harvested	Mean, all returned	Mean, those who fished
Wrangell	2C	238	130	903	3.8	6.9	36	18	120	3.3	6.7	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Subtotal, Area 2C		**2,492**	**1,320**	**8,340**	**3.3**	**6.3**	**486**	**200**	**1,245**	**2.6**	**6.2**	**0**	**0**	**0**	**0.0**	**0.0**	**84**	**23**	**162**	**1.9**	**7.0**
Chenega Bay	3A	7	5	57	8.1	11.4	0	0	0	0.0	0.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Chiniak	3A																				
Cordova	3A	293	131	802	2.7	6.1	56	23	128	2.3	5.6	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Karluk	3A	3	2	21	7.0	10.5	3	3	15	5.0	5.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Kodiak	3A	722	402	3,741	5.2	9.3	126	64	705	5.6	11.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Larsen Bay	3A	3	0	0	0.0	0.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Nanwalek	3A	4	3	232	58.0	77.3	0	0	0	0.0	0.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Old Harbor	3A	4	4	82	20.5	20.5	0	0	0	0.0	0.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Ouzinkie	3A	9	9	50	5.6	5.6	0	0	0	0.0	0.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Port Graham	3A	6	5	86	14.3	17.2	0	0	0	0.0	0.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Port Lions	3A	6	6	42	7.0	7.0	2	1	23	11.5	23.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Seldovia	3A	77	39	516	6.7	13.2	31	22	286	9.2	13.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Tatitlek	3A	6	3	18	3.0	6.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Yakutat	3A	43	17	161	3.7	9.5	10	7	64	6.4	9.1	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Subtotal, Area 3A		**1,186**	**629**	**5,838**	**4.9**	**9.3**	**228**	**120**	**1,221**	**5.4**	**10.2**	**0**	**0**	**0**	**0.0**	**0.0**	**0**	**0**	**0**	**0.0**	**0.0**
Chignik	3B																				
Chignik Lagoon	3B																				
Chignik Lake	3B																				
Cold Bay	3B	23	12	142	6.2	11.8	4	3	5	1.3	1.7	0	0	0	0.0	0.0	0	0	0	0.0	0.0
False Pass	3B																				
King Cove	3B	11	7	31	2.8	4.4	4	3	36	9.0	12.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Nelson Lagoon	3B																				
Perryville	3B																				
Sand Point	3B	4	1	10	2.5	10.0	2	2	16	8.0	8.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Subtotal, Area 3B		**39**	**21**	**189**	**4.8**	**9.0**	**11**	**8**	**57**	**5.2**	**7.1**	**0**	**0**	**0**	**0.0**	**0.0**	**0**	**0**	**0**	**0.0**	**0.0**
Unalaska	4A	67	40	340	5.1	8.5	9	6	139	15.4	23.2	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Subtotal, Area 4A		**67**	**40**	**340**	**5.1**	**8.5**	**9**	**6**	**139**	**15.4**	**23.2**	**0**	**0**	**0**	**0.0**	**0.0**	**0**	**0**	**0**	**0.0**	**0.0**

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Table E-2.–Page 8 of 12.

Rural community	Regulatory area	First mailing response: Number returned[a]	Number subsistence fished	Number of halibut harvested	Mean, all returned	Mean, those who fished	Second mailing response: Number returned	Number subsistence fished	Number of halibut harvested	Mean, all returned	Mean, those who fished	Third mailing response: Number returned	Number subsistence fished	Number of halibut harvested	Mean, all returned	Mean, those who fished	Staff administered: Number returned	Number subsistence fished	Number of halibut harvested	Mean, all returned	Mean, those who fished
Adak	4B																				
Subtotal, Area 4B																					
St. George Island	4C																				
Subtotal, Area 4C																					
Aleknagik	4E																				
Bethel	4E																				
Chefornak	4E																				
Dillingham	4E	13	1	0	0.0	0.0	4	0	0	0.0	0.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Egegik	4E																				
King Salmon	4E																				
Kongiganak	4E																				
Manokotak	4E																				
Naknek	4E	2	1	0	0.0	0.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Nightmute	4E																				
Nome	4E	10	4	30	3.0	7.5	1	0	0	0.0	0.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Port Heiden	4E																				
Quinhagak	4E																				
South Naknek	4E																				
Teller	4E	1	0	0	0.0	0.0	1	0	0	0.0	0.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Togiak	4E																				
Subtotal, Area 4E		**31**	**7**	**30**	**1.0**	**4.3**	**9**	**1**	**10**	**1.1**	**10.0**	**0**	**0**	**0**	**0.0**	**0.0**	**0**	**0**	**0**	**0.0**	**0.0**
Rural community subtotal		3,817	2,018	14,748	3.9	7.3	744	335	2,672	0.5	8.0	0	0	0	0.0	0.0	84	23	162	1.9	7.0
Total (tribal and rural)		5,188	2,590	21,593	4.2	8.3	1,046	437	3,672	3.5	8.4	0	0	0	0.0	0.0	436	153	1,459	3.3	9.5

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Table E-2.–Page 9 of 12.

City	Regulatory area	First mailing response					Second mailing response					Third mailing response					Staff administered				
		Number returned[a]	Number subsistence fished	Number of halibut harvested	Mean, all returned	Mean, those who fished	Number returned	Number subsistence fished	Number of halibut harvested	Mean, all returned	Mean, those who fished	Number returned	Number subsistence fished	Number of halibut harvested	Mean, all returned	Mean, those who fished	Number returned	Number subsistence fished	Number of halibut harvested	Mean, all returned	Mean, those who fished
Adak	AK	3	2	18	6.0	9.0	1	0	0	0.0	0.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Akhiok	AK	0	0	0	0.0	0.0	1	1	8	8.0	8.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Akiachak	AK																				
Akutan	AK	2	2	19	9.5	9.5	2	1	11	5.5	11.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Aleknagik	AK																				
Anchor Point	AK	6	1	10	1.7	10.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Anchorage	AK	85	23	305	3.6	13.3	17	4	44	2.6	11.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Angoon	AK	27	17	325	12.0	19.1	4	2	12	3.0	6.0	0	0	0	0.0	0.0	65	28	381	5.9	13.6
Atka	AK																				
Auke Bay	AK																				
Barrow	AK																				
Bethel	AK	1	1	14	14.0	14.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Chefornak	AK	6	3	29	4.8	9.7	0	0	0	0.0	0.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Chenega Bay	AK	8	6	72	9.0	12.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Chevak	AK																				
Chignik	AK	8	2	15	1.9	7.5	0	0	0	0.0	0.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Chignik Lagoon	AK	4	3	29	7.3	9.7	0	0	0	0.0	0.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Chignik Lake	AK																				
Chiniak	AK	10	8	100	10.0	12.5	1	1	10	10.0	10.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Chugiak	AK																				
Clarks Point	AK																				
Coffman Cove	AK	25	13	77	3.1	5.9	13	6	26	2.0	4.3	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Cold Bay	AK	26	14	153	5.9	10.9	4	3	5	1.3	1.7	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Cordova	AK	317	142	961	3.0	6.8	64	25	147	2.3	5.9	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Craig	AK	273	137	1,100	4.0	8.0	53	28	233	4.4	8.3	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Dillingham	AK	14	1	0	0.0	0.0	5	0	0	0.0	0.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Douglas	AK	2	0	0	0.0	0.0	2	1	22	11.0	22.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Dutch Harbor	AK	41	24	266	6.5	11.1	7	3	69	9.9	23.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Eagle River	AK	6	3	37	6.2	12.3	0	0	0	0.0	0.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Edna Bay	AK	15	11	49	3.3	4.5	3	2	11	3.7	5.5	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Eek	AK	2	2	2	1.0	1.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Egegik	AK																				
Elfin Cove	AK	6	3	7	1.2	2.3	4	2	12	3.0	6.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0

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Table E-2.–Page 10 of 12.

City	Regulatory area	First mailing response					Second mailing response					Third mailing response					Staff administered				
		Number returned[a]	Number subsistence fished	Number of halibut harvested	Mean, all returned	Mean, those who fished	Number returned	Number subsistence fished	Number of halibut harvested	Mean, all returned	Mean, those who fished	Number returned	Number subsistence fished	Number of halibut harvested	Mean, all returned	Mean, those who fished	Number returned	Number subsistence fished	Number of halibut harvested	Mean, all returned	Mean, those who fished
Elmemdorf AFB	AK																				
Ester	AK																				
Fairbanks	AK	4	1	4	1.0	4.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0
False Pass	AK																				
Fritz Creek	AK																				
Gakona	AK																				
Gambell	AK																				
Girdwood	AK																				
Glennallen	AK																				
Golovin	AK																				
Goodnews Bay	AK																				
Gustavus	AK	37	17	69	1.9	4.1	6	3	18	3.0	6.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Haines	AK	276	166	715	2.6	4.3	58	30	187	3.2	6.2	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Hollis	AK																				
Homer	AK	13	6	113	8.7	18.8	1	1	12	12.0	12.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Hoonah	AK	114	51	500	4.4	9.8	29	7	35	1.2	5.0	0	0	0	0.0	0.0	1	1	0	0.0	0.0
Hooper Bay	AK	6	2	12	2.0	6.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Hydaburg	AK	32	16	113	3.5	7.1	0	0	0	0.0	0.0	0	0	0	0.0	0.0	84	44	382	4.5	8.7
Hyder	AK	19	13	46	2.4	3.5	5	1	5	1.0	5.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Juneau	AK	91	36	410	4.5	11.4	26	7	48	1.8	6.9	0	0	0	0.0	0.0	0	1	10	0.0	10.0
Kake	AK	64	23	228	3.6	9.9	19	9	107	5.6	11.9	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Karluk	AK	3	2	21	7.0	10.5	3	3	15	5.0	5.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Kasaan	AK	4	1	1	0.3	1.0	1	0	0	0.0	0.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Kasilof	AK	7	5	122	17.4	24.4	1	1	2	2.0	2.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Kenai	AK	45	8	112	2.5	14.0	9	2	26	2.9	13.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Ketchikan	AK	160	57	696	4.4	12.2	30	11	73	2.4	6.6	0	0	0	0.0	0.0	195	55	564	2.9	10.3
King Cove	AK	30	19	222	7.4	11.7	12	8	46	3.8	5.8	0	0	0	0.0	0.0	0	0	0	0.0	0.0
King Salmon	AK																				
Kipnuk	AK	1	1	17	17.0	17.0	1	1	25	25.0	25.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Klawock	AK	104	45	409	3.9	9.1	23	10	92	4.0	9.2	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Klukwan	AK																				
Kodiak	AK	775	432	3,953	5.1	9.2	136	64	686	5.0	10.7	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Kongiganak	AK	2	1	4	2.0	4.0	1	0	0	0.0	0.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0

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Table E-2.–Page 11 of 12.

City	Regulatory area	First mailing response					Second mailing response					Third mailing response					Staff administered				
		Number returned[a]	Number subsistence fished	Number of halibut harvested	Mean, all returned	Mean, those who fished	Number returned	Number subsistence fished	Number of halibut harvested	Mean, all returned	Mean, those who fished	Number returned	Number subsistence fished	Number of halibut harvested	Mean, all returned	Mean, those who fished	Number returned	Number subsistence fished	Number of halibut harvested	Mean, all returned	Mean, those who fished
Kotzebue	AK																				
Kwigillingok	AK																				
Larsen Bay	AK	15	10	58	3.9	5.8	4	3	38	9.5	12.7	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Manokotak	AK																				
Mekoryuk	AK																				
Metlakatla	AK	63	23	196	3.1	8.5	26	8	141	5.4	17.6	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Meyers Chuck	AK	7	7	34	4.9	4.9	1	0	0	0.0	0.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Naknek	AK	2	1	0	0.0	0.0	1	0	0	0.0	0.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Nanwalek	AK	15	14	467	31.1	33.4	6	6	100	16.7	16.7	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Naukati	AK	16	11	92	5.8	8.4	4	0	0	0.0	0.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Nelson Lagoon	AK																				
Newtok	AK																				
Nightmute	AK																				
Nikiski	AK	1	0	0	0.0	0.0	1	0	0	0.0	0.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Ninilchik	AK	16	3	99	6.2	33.0	3	0	0	0.0	0.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Nome	AK	13	6	40	3.1	6.7	1	0	0	0.0	0.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0
North Pole	AK																				
Old Harbor	AK	17	13	139	8.2	10.7	3	0	0	0.0	0.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Ouzinkie	AK	20	16	109	5.5	6.8	5	0	0	0.0	0.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Palmer	AK	2	1	1	0.5	1.0	1	0	0	0.0	0.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Pelican	AK	23	13	78	3.4	6.0	8	6	49	6.1	8.2	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Perryville	AK	8	7	68	8.5	9.7	4	0	0	0.0	0.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Petersburg	AK	555	260	1,796	3.2	6.9	121	30	225	1.9	7.5	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Pilot Point	AK																				
Point Baker	AK	7	5	36	5.1	7.2	8	6	24	3.0	4.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Port Alexander	AK	16	14	119	7.4	8.5	1	0	0	0.0	0.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Port Graham	AK	17	12	257	15.1	21.4	12	6	61	5.1	10.2	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Port Heiden	AK																				
Port Lions	AK	21	14	106	5.0	7.6	6	5	75	12.5	15.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Port Protection	AK																				
Port William	AK																				
Quinhagak	AK																				
Sand Point	AK	50	20	174	3.5	8.7	11	6	39	3.5	6.5	0	0	0	0.0	0.0	0	0	0	0.0	0.0

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Table E-2.–Page 12 of 12.

City	Regulatory area	First mailing response: Number returned[a]	Number subsistence fished	Number of halibut harvested	Mean, all returned	Mean, those who fished	Second mailing response: Number returned	Number subsistence fished	Number of halibut harvested	Mean, all returned	Mean, those who fished	Third mailing response: Number returned	Number subsistence fished	Number of halibut harvested	Mean, all returned	Mean, those who fished	Staff administered: Number returned	Number subsistence fished	Number of halibut harvested	Mean, all returned	Mean, those who fished
Savoonga	AK	7	3	22	3.1	7.3	2	0	0	0.0	0.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Saxman	AK	0	0	0	0.0	0.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0	1	0	0	0.0	0.0
Seldovia	AK	76	42	560	7.4	13.3	29	22	286	9.9	13.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Seward	AK	3	1	5	1.7	5.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Sitka	AK	795	399	2,129	2.7	5.3	131	52	281	2.1	5.4	0	0	0	0.0	0.0	88	24	122	1.4	5.1
Skagway	AK	37	27	72	1.9	2.7	4	1	2	0.5	2.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Soldotna	AK	22	7	904	41.1	129.1	3	0	0	0.0	0.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0
St. George Island	AK																				
St. Paul Island	AK	11	6	150	13.6	25.0	1	0	0	0.0	0.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Sterling	AK																				
Tatitlek	AK	7	5	75	10.7	15.0	1	1	1	1.0	1.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Teller	AK	1	0	0	0.0	0.0	1	0	0	0.0	0.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Tenakee Springs	AK	39	21	114	2.9	5.4	7	2	8	1.1	4.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Thorne Bay	AK	74	52	346	4.7	6.7	15	8	28	1.9	3.5	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Togiak	AK																				
Toksook Bay	AK	12	10	105	8.8	10.5	0	0	0	0.0	0.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Trapper Creek	AK																				
Tununak	AK	3	2	21	7.0	10.5	0	0	0	0.0	0.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Twin Hills	AK																				
Unalakleet	AK																				
Unalaska	AK	37	21	92	2.5	4.4	6	6	96	16.0	16.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Valdez	AK	20	6	42	2.1	7.0	1	0	0	0.0	0.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Ward Cove	AK	10	3	16	1.6	5.3	4	1	2	0.5	2.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Wasilla	AK	13	1	0	0.0	0.0	3	1	14	4.7	14.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Whale Pass	AK	8	6	6	0.8	1.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Whittier	AK																				
Willow	AK																				
Wrangell	AK	299	163	1,154	3.9	7.1	38	19	135	3.6	7.1	0	0	0	0.0	0.0	2	0	0	0.0	0.0
Yakutat	AK	57	24	323	5.7	13.5	16	10	80	5.0	8.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Subtotal, Alaska		**5,123**	**2,586**	**21,584**	**4.2**	**8.3**	**1,036**	**437**	**3,672**	**3.5**	**8.4**	**0**	**0**	**0**	**0.0**	**0.0**	**436**	**153**	**1,459**	**3.3**	**9.5**
Subtotal, non-Alaska		**65**	**4**	**9**	**0.1**	**2.3**	**10**	**0**	**0**	**0.0**	**0.0**	**0**	**0**	**0**	**0.0**	**0.0**	**0**	**0**	**0**	**0.0**	**0.0**
Total		5,188	2,590	21,593	4.2	8.3	1,046	437	3,672	3.5	8.4	0	0	0	0.0	0.0	436	153	1,459	3.3	9.5

a. To protect confidentiality, data for tribes and communities with 5 or fewer SHARCs issued are not reported in this table. Subtotals include all tribes and communities. Blank cells indicate redacted data.

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Appendix E-3.–Estimated subsistence harvests of halibut by gear type.

			Set hook gear			Hook and line or handline			All gear				
Tribal name	Regulatory area	Number of SHARCs issued[a]	Estimated number respondents fished	Estimated number halibut harvested	Estimated pounds halibut harvested	Estimated number respondents fished	Estimated number halibut harvested	Estimated pounds halibut harvested	Estimated number respondents fished	Estimated number halibut harvested	Confidence interval for number of halibut	Estimated pounds halibut harvested	Confidence interval for pounds of halibut
Angoon Community Association	2C	92	35	559	8,130	15	50	904	42	609	2.8%	9,033	2.5%
Aukquan Traditional Council	2C	1											
Central Council Tlingit and Haida Indian Tribes	2C	488	157	1,642	28,807	72	419	4,590	184	2,060	1.0%	33,397	1.0%
Chilkat Indian Village	2C	23	5	48	684	1	5	18	5	53	13.9%	702	12.6%
Chilkoot Indian Association	2C	48	17	105	3,556	4	6	105	21	111	9.6%	3,661	13.8%
Craig Community Association	2C	63	24	263	5,447	4	23	329	24	286	5.4%	5,776	4.9%
Douglas Indian Association	2C	16	0	0	0	0	0	0	0	0	0.0%	0	0.0%
Hoonah Indian Association	2C	141	39	428	8,346	24	77	2,010	51	505	3.8%	10,356	4.2%
Hydaburg Cooperative Association	2C	124	56	483	19,529	23	52	3,098	63	535	1.3%	22,627	1.3%
Ketchikan Indian Corporation	2C	503	116	1,156	24,475	54	359	5,910	136	1,515	1.2%	30,385	1.0%
Klawock Cooperative Association	2C	80	22	124	3,417	7	47	609	27	171	6.3%	4,025	7.7%
Metlakatla Indian Community, Annette Island Reserve	2C	172	45	574	13,041	11	27	275	52	601	3.3%	13,316	3.4%
Organized Village of Kake	2C	80	26	238	5,394	3	3	123	26	241	3.8%	5,517	3.8%
Organized Village of Kasaan	2C	8	3	11	315	2	2	22	3	12	95.4%	337	103.7%
Organized Village of Saxman	2C	37	16	182	2,737	10	58	770	22	240	8.7%	3,507	8.4%
Petersburg Indian Association	2C	73	22	150	2,527	20	91	1,276	27	241	4.5%	3,803	4.6%

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Table E-3.–Page 2 of 9.

Tribal name	Regulatory area	Number of SHARCs issued[a]	Set hook gear: Estimated number respondents fished	Set hook gear: Estimated number halibut harvested	Set hook gear: Estimated pounds halibut harvested	Hook and line or handline: Estimated number respondents fished	Hook and line or handline: Estimated number halibut harvested	Hook and line or handline: Estimated pounds halibut harvested	All gear: Estimated number respondents fished	All gear: Estimated number halibut harvested	All gear: Confidence interval for number of halibut	All gear: Estimated pounds halibut harvested	All gear: Confidence interval for pounds of halibut
Sitka Tribe of Alaska	2C	289	120	671	14,548	38	81	1,121	131	752	1.3%	15,669	1.1%
Skagway Village	2C	3											
Wrangell Cooperative Association	2C	94	39	293	6,437	17	17	371	42	309	2.6%	6,809	2.9%
Subtotal, Area 2C		**2,335**	**743**	**6,926**	**147,390**	**306**	**1,319**	**21,576**	**859**	**8,245**	**69.3%**	**168,965**	**29.6%**
Kenaitze Indian Tribe	3A	123	12	103	1,407	23	234	7,044	27	337	4.5%	8,450	6.5%
Lesnoi Village (Woody Island)	3A	71	7	44	841	2	7	127	7	51	8.1%	969	7.9%
Native Village of Afognak	3A	24	15	99	1,052	8	22	359	15	121	9.3%	1,411	7.7%
Native Village of Akhiok	3A	9	5	14	63	9	45	1,033	9	59	91.4%	1,096	332.4%
Native Village of Chenega	3A	17	9	104	4,463	6	19	759	9	123	22.9%	5,221	23.6%
Native Village of Eyak	3A	80	30	318	4,079	17	36	751	30	355	5.9%	4,830	4.4%
Native Village of Karluk	3A	4											
Native Village of Larsen Bay	3A	37	11	95	1,424	25	158	2,623	27	254	6.0%	4,047	5.5%
Native Village of Nanwalek	3A	44	11	192	4,044	14	145	1,971	18	337	0.0%	6,015	0.0%
Native Village of Ouzinkie	3A	37	17	94	2,025	9	41	598	17	136	9.2%	2,623	9.2%
Native Village of Port Graham	3A	43	21	379	9,986	12	143	1,515	23	522	6.3%	11,501	3.6%
Native Village of Port Lions	3A	32	15	129	2,225	7	41	794	19	170	5.1%	3,019	4.4%
Native Village of Tatitlek	3A	23	10	146	2,064	0	0	0	10	146	21.9%	2,064	18.1%
Ninilchik Village	3A	81	6	842	2,166	20	1,138	6,607	20	1,980	9.3%	8,773	6.1%
Seldovia Village Tribe	3A	63	19	300	5,308	15	164	1,997	28	464	4.7%	7,305	4.8%
Sun'aq Tribe of Kodiak (formerly Shoonaq')	3A	126	65	518	12,792	18	94	2,565	68	612	3.3%	15,357	3.8%
Village of Kanatak	3A	18	0	0	0	0	0	0	0	0	0.0%	0	0.0%

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Table E-3.–Page 3 of 9.

Tribal name	Regulatory area	Number of SHARCs issued[a]	Set hook gear			Hook and line or handline			All gear				
			Estimated number respondents fished	Estimated number halibut harvested	Estimated pounds halibut harvested	Estimated number respondents fished	Estimated number halibut harvested	Estimated pounds halibut harvested	Estimated number respondents fished	Estimated number halibut harvested	Confidence interval for number of halibut	Estimated pounds halibut harvested	Confidence interval for pounds of halibut
Village of Old Harbor	3A	46	7	42	838	15	86	2,384	20	127	7.4%	3,222	8.5%
Village of Salamatoff	3A	21	0	0	0	5	86	902	5	86	18.3%	902	18.3%
Yakutat Tlingit Tribe	3A	41	20	319	7,449	9	48	1,104	20	368	8.4%	8,553	7.5%
Subtotal, Area 3A		**940**	**279**	**3,739**	**62,225**	**215**	**2,508**	**33,134**	**372**	**6,247**	**0.9%**	**95,359**	**0.5%**
Agdaagux Tribe of King Cove	3B	72	19	213	2,706	31	221	3,380	41	434	4.6%	6,085	4.2%
Chignik Lake Village	3B	11	0	0	0	10	60	700	10	60	0.0%	700	0.0%
Ivanoff Bay Village	3B	8	2	0	0	4	4	84	4	4	85.1%	84	85.1%
Native Village of Belkofski	3B	5											
Native Village of Chignik	3B	7	0	0	0	1	5	77	1	5	0.0%	77	0.0%
Native Village of Chignik Lagoon	3B	20	4	34	857	8	53	768	11	87	15.2%	1,626	17.6%
Native Village of False Pass	3B	1											
Native Village of Nelson Lagoon	3B	3											
Native Village of Perryville	3B	22	11	90	1,711	9	22	517	13	112	11.7%	2,228	12.9%
Native Village of Unga	3B	8	0	0	0	3	5	93	3	5	128.6%	93	128.6%
Pauloff Harbor Village	3B	48	10	223	1,824	17	86	1,320	21	309	16.1%	3,144	11.3%
Qagan Toyagungin Tribe of Sand Point Village	3B	86	13	107	1,603	22	88	1,603	32	194	3.8%	3,206	4.2%
Subtotal, Area 3B		**291**	**60**	**666**	**8,700**	**106**	**544**	**8,543**	**134**	**1,209**	**1.4%**	**17,243**	**1.3%**
Native Village of Akutan	4A	21	3	6	147	9	84	1,512	9	90	21.9%	1,659	21.6%
Qawalingin Tribe of Unalaska	4A	36	12	35	507	17	72	856	20	107	12.4%	1,363	12.7%
Subtotal, Area 4A		**57**	**15**	**41**	**654**	**26**	**156**	**2,368**	**29**	**197**	**7.0%**	**3,022**	**7.3%**

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Table E-3.–Page 4 of 9.

Tribal name	Regulatory area	Number of SHARCs issued[a]	Set hook gear: Estimated number respondents fished	Set hook gear: Estimated number halibut harvested	Set hook gear: Estimated pounds halibut harvested	Hook and line or handline: Estimated number respondents fished	Hook and line or handline: Estimated number halibut harvested	Hook and line or handline: Estimated pounds halibut harvested	All gear: Estimated number respondents fished	All gear: Estimated number halibut harvested	All gear: Confidence interval for number of halibut	All gear: Estimated pounds halibut harvested	All gear: Confidence interval for pounds of halibut
Native Village of Atka	4B	5											
Subtotal, Area 4B		**5**											
Pribilof Islands Aleut Community of St. George	4C	6	5	23	563	5	8	158	6	30	54.5%	720	51.9%
Pribilof Islands Aleut Community of St. Paul	4C	42	13	468	9,555	6	16	584	19	485	14.9%	10,139	13.7%
Subtotal, Area 4C		**48**	**17**	**491**	**10,118**	**11**	**24**	**742**	**25**	**515**	**10.9%**	**10,859**	**10.0%**
Native Village of Diomede (Inalik)	4D	1											
Native Village of Gambell	4D	1											
Native Village of Savoonga	4D	18	4	36	942	2	6	328	6	42	26.6%	1,270	23.6%
Subtotal, Area 4D		**20**	**5**	**36**	**942**	**2**	**6**	**328**	**7**	**42**	**25.3%**	**1,270**	**22.5%**
Chevak Native Village (Kashunamiut)	4E	3											
Chinik Eskimo Community	4E	1											
Egegik Village	4E	1											
King Island Native Community	4E	1											
Levelock Village	4E	1											
Manokotak Village	4E	1											
Naknek Native Village	4E	8	0	0	0	0	0	0	0	0	0.0%	0	0.0%
Native Village of Aleknagik	4E	6	0	0	0	0	0	0	0	0	0.0%	0	0.0%
Native Village of Brevig Mission	4E	1											
Native Village of Council	4E	4											
Native Village of Dillingham (Curyung)	4E	16	2	5	480	0	0	0	2	5	47.4%	480	47.4%

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Table E-3.–Page 5 of 9.

Tribal name	Regulatory area	Number of SHARCs issued[a]	Set hook gear			Hook and line or handline			All gear				
			Estimated number respondents fished	Estimated number halibut harvested	Estimated pounds halibut harvested	Estimated number respondents fished	Estimated number halibut harvested	Estimated pounds halibut harvested	Estimated number respondents fished	Estimated number halibut harvested	Confidence interval for number of halibut	Estimated pounds halibut harvested	Confidence interval for pounds of halibut
Native Village of Eek	4E	7	0	0	0	7	37	1,045	7	37	108.8%	1,045	108.8%
Native Village of Goodnews Bay (Mumtraq)	4E	4											
Native Village of Hooper Bay	4E	16	0	0	0	5	32	345	5	32	35.8%	345	33.6%
Native Village of Kanakanak	4E	1											
Native Village of Kipnuk	4E	13	0	0	0	13	273	2,230	13	273	64.3%	2,230	75.7%
Native Village of Kongiganak	4E	5											
Native Village of Koyuk	4E	1											
Native Village of Kwigillingok	4E	4											
Native Village of Kwinhagak	4E	3											
Native Village of Mekoryuk	4E	6	4	48	504	2	4	70	4	52	106.2%	574	107.6%
Native Village of Nightmute	4E	1											
Native Village of Scammon Bay	4E	3											
Native Village of Shaktoolik	4E	1											
Native Village of Toksook Bay (Nunakauyak)	4E	33	5	38	315	10	67	560	10	105	32.6%	875	36.5%
Native Village of Tununak	4E	13	0	0	0	9	91	576	9	91	67.8%	576	67.4%
Native Village of Unalakleet	4E	3											
Native Village of Wales	4E	1											
Newtok Village	4E	1											
Nome Eskimo Community	4E	15	4	26	630	0	0	0	4	26	31.5%	630	29.4%

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Table E-3.–Page 6 of 9.

Tribal name	Regulatory area	Number of SHARCs issued[a]	Set hook gear			Hook and line or handline			All gear				
			Estimated number respondents fished	Estimated number halibut harvested	Estimated pounds halibut harvested	Estimated number respondents fished	Estimated number halibut harvested	Estimated pounds halibut harvested	Estimated number respondents fished	Estimated number halibut harvested	Confidence interval for number of halibut	Estimated pounds halibut harvested	Confidence interval for pounds of halibut
Orutsararmuit Native Village	4E	9	3	36	315	3	18	168	3	54	124.2%	483	124.2%
South Naknek Village	4E	1											
Stebbins Community Association	4E	4											
Traditional Village of Togiak	4E	3											
Twin Hills Village	4E	1											
Ugashik Village	4E	2											
Village of Chefornak	4E	14	0	0	0	8	75	1,081	8	75	22.6%	1,081	23.3%
Village of Clark's Point	4E	1											
Village of Kotlik	4E	1											
Subtotal, Area 4E		**210**	**22**	**233**	**3,868**	**65**	**678**	**7,721**	**73**	**911**	**3.0%**	**11,589**	**4.1%**
Tribal SHARC subtotal	**All regulatory areas**	**3,906**	**1,143**	**12,137**	**233,984**	**734**	**5,247**	**74,585**	**1,502**	**17,384**	**32.8%**	**308,569**	**16.2%**

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Table E-3.–Page 7 of 9.

			Set hook gear			Hook and line or handline			All gear				
Rural community	Regulatory area	Number of SHARCs issued[a]	Estimated number respondents fished	Estimated number halibut harvested	Estimated pounds halibut harvested	Estimated number respondents fished	Estimated number halibut harvested	Estimated pounds halibut harvested	Estimated number respondents fished	Estimated number halibut harvested	Confidence interval for number of halibut	Estimated pounds halibut harvested	Confidence interval for pounds of halibut
Angoon	2C	16	6	87	1,306	6	198	4,349	9	285	0.0%	5,655	0.0%
Coffman Cove	2C	49	12	51	1,113	14	78	1,296	23	129	2.5%	2,409	2.6%
Craig	2C	376	149	1,165	20,122	52	240	3,442	172	1,405	0.8%	23,563	0.8%
Edna Bay	2C	37	24	112	2,228	1	0	0	24	112	7.3%	2,228	6.2%
Elfin Cove	2C	15	7	21	510	4	4	109	7	25	17.5%	619	19.0%
Gustavus	2C	61	15	74	1,597	14	48	800	27	121	3.3%	2,396	3.8%
Haines	2C	426	245	1,007	20,470	65	74	1,282	252	1,080	0.5%	21,753	0.5%
Hollis	2C	44	17	103	4,372	6	10	221	20	114	4.3%	4,593	4.1%
Hoonah	2C	99	30	207	3,377	20	143	1,822	40	350	1.8%	5,200	1.6%
Hydaburg	2C	10	6	48	1,551	1	0	0	6	48	18.9%	1,551	20.1%
Hyder	2C	32	18	58	1,346	9	6	102	18	64	7.4%	1,447	5.6%
Juneau	2C	3											
Kake	2C	35	17	162	4,956	2	11	402	17	174	5.4%	5,358	5.2%
Kasaan	2C	8	0	0	0	4	4	110	4	4	97.2%	110	97.2%
Ketchikan	2C	5											
Klawock	2C	155	44	308	5,917	38	332	3,909	65	640	1.5%	9,826	1.7%
Klukwan	2C	2											
Metlakatla	2C	32	11	92	2,210	6	14	258	12	106	7.0%	2,468	6.8%
Meyers Chuck	2C	9	7	33	1,133	2	1	14	7	34	0.0%	1,147	0.0%
Naukati Bay	2C	40	24	56	1,590	8	0	0	24	56	4.3%	1,590	4.6%
Pelican	2C	40	23	100	2,207	14	24	458	23	125	5.8%	2,665	5.1%
Petersburg	2C	875	302	1,784	31,581	190	790	12,168	384	2,574	0.3%	43,749	0.3%
Port Alexander	2C	26	20	130	3,606	3	10	162	20	140	9.5%	3,768	8.9%
Port Protection	2C	16	9	95	1,726	5	26	621	12	121	13.6%	2,347	12.0%
Pt. Baker	2C	15	10	29	694	4	5	225	10	34	8.2%	919	10.0%
Saxman	2C	11	3	100	817	3	183	1,342	3	283	42.7%	2,158	40.6%
Sitka	2C	1,363	586	2,933	62,454	184	416	7,324	632	3,349	0.2%	69,779	0.2%
Skagway	2C	51	34	76	1,603	14	11	181	35	87	3.9%	1,785	3.8%
Tenakee Springs	2C	53	20	97	1,950	11	42	718	26	138	2.2%	2,668	2.2%
Thorne Bay	2C	119	68	375	9,963	40	102	1,886	76	477	1.4%	11,849	1.5%
Ward Cove	2C	2											
Whale Pass	2C	18	7	8	256	7	4	105	10	12	0.0%	361	0.0%
Wrangell	2C	377	169	1,045	20,601	83	377	6,390	197	1,422	135.1%	26,991	47.9%
Subtotal, Area 2C		**4,420**	**1,887**	**10,373**	**211,784**	**815**	**3,218**	**50,117**	**2,161**	**13,591**	**20.0%**	**261,900**	**7.0%**
Chenega Bay	3A	7	5	46	672	4	11	154	5	57	0.0%	826	0.0%
Chiniak	3A	3											
Cordova	3A	498	183	989	18,951	106	271	5,098	211	1,260	0.5%	24,049	0.5%
Karluk	3A	6	1	0	0	5	36	417	5	36	0.0%	417	0.0%
Kodiak	3A	1,552	676	6,157	115,720	353	1,739	34,281	827	7,895	30.1%	150,002	38.8%

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Table E-3.–Page 8 of 9.

			Set hook gear			Hook and line or handline			All gear				
Rural community	Regulatory area	Number of SHARCs issued[a]	Estimated number respondents fished	Estimated number halibut harvested	Estimated pounds halibut harvested	Estimated number respondents fished	Estimated number halibut harvested	Estimated pounds halibut harvested	Estimated number respondents fished	Estimated number halibut harvested	Confidence interval for number of halibut	Estimated pounds halibut harvested	Confidence interval for pounds of halibut
Larsen Bay	3A	6	0	0	0	0	0	0	0	0	0.0%	0	0.0%
Nanwalek	3A	7	1	200	3,150	3	32	588	3	232	0.0%	3,738	0.0%
Old Harbor	3A	7	3	56	831	5	46	884	5	103	36.5%	1,715	28.8%
Ouzinkie	3A	13	3	33	583	11	33	551	12	67	15.0%	1,134	15.6%
Port Graham	3A	10	3	58	1,260	6	85	895	8	143	24.2%	2,155	26.7%
Port Lions	3A	11	6	43	637	5	46	690	10	89	11.6%	1,327	9.6%
Seldovia	3A	144	50	444	6,796	50	563	7,389	79	1,007	1.2%	14,184	1.2%
Tatitlek	3A	10	3	15	292	2	11	224	4	26	28.7%	516	31.6%
Yakutat	3A	74	26	205	5,523	12	88	2,212	31	293	3.0%	7,735	3.7%
Subtotal, Area 3A		**2,348**	**962**	**8,276**	**154,891**	**562**	**2,961**	**53,382**	**1,202**	**11,237**	**12.6%**	**208,273**	**16.7%**
Chignik	3B	1											
Chignik Lagoon	3B	1											
Chignik Lake	3B	1											
Cold Bay	3B	32	16	142	2,431	10	21	436	17	163	3.9%	2,866	3.8%
False Pass	3B	1											
King Cove	3B	25	6	16	208	12	104	2,129	17	121	13.7%	2,337	13.7%
Nelson Lagoon	3B	1											
Perryville	3B	1											
Sand Point	3B	15	0	0	0	8	68	1,147	8	68	23.9%	1,147	30.1%
Subtotal, Area 3B		**78**	**22**	**158**	**2,639**	**30**	**199**	**3,851**	**42**	**357**	**3.1%**	**6,490**	**3.1%**
Unalaska	4A	119	43	402	6,823	40	291	4,633	69	693	2.0%	11,456	2.3%
Subtotal, Area 4A		**119**	**43**	**402**	**6,823**	**40**	**291**	**4,633**	**69**	**693**	**2.0%**	**11,456**	**2.3%**
Adak	4B	5											
Subtotal, Area 4B		**5**											
St. George Island	4C	1											
Subtotal, Area 4C		**1**											
Aleknagik	4E	2											
Bethel	4E	1											
Chefornak	4E	1											
Dillingham	4E	23	1	0	0	0	0	0	1	0	0.0%	0	0.0%
Egegik	4E	1											
King Salmon	4E	2											
Kongiganak	4E	1											
Manokotak	4E	2											
Naknek	4E	6	3	0	0	0	0	0	3	0	0.0%	0	0.0%
Nightmute	4E	1											
Nome	4E	20	5	38	571	0	0	0	5	38	30.4%	571	31.9%
Port Heiden	4E	3											
Quinhagak	4E	1											
South Naknek	4E	1											

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Table E-3.–Page 9 of 9.

Rural community	Regulatory area	Number of SHARCs issued[a]	Set hook gear: Estimated number respondents fished	Set hook gear: Estimated number halibut harvested	Set hook gear: Estimated pounds halibut harvested	Hook and line or handline: Estimated number respondents fished	Hook and line or handline: Estimated number halibut harvested	Hook and line or handline: Estimated pounds halibut harvested	All gear: Estimated number respondents fished	All gear: Estimated number halibut harvested	All gear: Confidence interval for number of halibut	All gear: Estimated pounds halibut harvested	All gear: Confidence interval for pounds of halibut
Teller	4E	10	0	0	0	0	0	0	0	0	0.0%	0	0.0%
Togiak	4E	1											
Subtotal, Area 4E		**76**	**11**	**48**	**661**	**1**	**0**	**0**	**11**	**48**	**13.5%**	**661**	**14.4%**
Rural SHARC subtotal	**All regulatory areas**	**7,047**	**2,928**	**19,279**	**377,008**	**1,449**	**6,669**	**111,982**	**3,489**	**25,948**	**10.6%**	**488,990**	**4.4%**
Tribal subtotal	**All**	**3,906**	**1,143**	**12,137**	**233,984**	**734**	**5,247**	**74,585**	**1,502**	**17,384**	**32.8%**	**308,569**	**16.2%**
Rural community subtotal	**All**	**7,047**	**2,928**	**19,279**	**377,008**	**1,449**	**6,669**	**111,982**	**3,489**	**25,948**	**10.6%**	**488,990**	**4.4%**
Total	**All**	**10,953**	**4,071**	**31,416**	**610,992**	**2,183**	**11,916**	**186,567**	**4,991**	**43,332**	**7.8%**	**797,560**	**3.4%**

	Regulatory area	Number of SHARCs issued[a]	Set hook gear: Estimated number respondents fished	Set hook gear: Estimated number halibut harvested	Set hook gear: Estimated pounds halibut harvested	Hook and line or handline: Estimated number respondents fished	Hook and line or handline: Estimated number halibut harvested	Hook and line or handline: Estimated pounds halibut harvested	All gear: Estimated number respondents fished	All gear: Estimated number halibut harvested	All gear: Confidence interval for number of halibut	All gear: Estimated pounds halibut harvested	All gear: Confidence interval for pounds of halibut
	2C	6,755	2,630	17,299	359,173	1,121	4,537	71,692	3,020	21,836	15.1%	430,866	5.3%
	3A	3,288	1,240	12,015	217,116	777	5,469	86,515	1,574	17,484	8.4%	303,632	11.8%
	3B	369	82	824	11,339	137	743	12,394	176	1,567	1.0%	23,733	0.9%
	4A	176	58	443	7,477	66	447	7,000	99	890	1.8%	14,477	2.0%
	4B	10	6	27	298	4	13	175	6	40	38.0%	473	35.6%
	4C	49	17	491	10,118	11	24	742	25	515	11.1%	10,859	10.1%
	4D	20	5	36	942	2	6	328	7	42	25.3%	1,270	22.5%
	4E	286	33	281	4,529	66	678	7,721	84	959	2.2%	12,250	3.0%
Total	**All**	**10,953**	**4,071**	**31,416**	**610,992**	**2,183**	**11,916**	**186,567**	**4,991**	**43,332**	**7.8%**	**797,560**	**3.4%**

a. To protect confidentiality, data for tribes and communities with 5 or fewer SHARCs issued are not reported in this table. Subtotals include all tribes and communities. Blank cells indicate redacted data.

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Appendix E-4.–Estimated subsistence harvests of halibut by place of residence.

City	State	Number of SHARCs Issued[a]	Subsistence fished	Subsistence harvest		Sport fished	Sport harvest		Lingcod bycatch		Rockfish bycatch	
			Estimated number respondents	Estimated number halibut	Estimated pounds halibut	Estimated number respondents	Estimated number halibut	Estimated pounds halibut	Estimated number respondents	Estimated number lingcod	Estimated number respondents	Estimated number rockfish
Adak	AK	8	5	36	559	0	0	0	0	0	0	0
Akhiok	AK	6	5	36	1,008	0	0	0	0	0	0	0
Akiachak	AK	1										
Akutan	AK	16	9	90	1,659	0	0	0	3	15	6	90
Aleknagik	AK	3										
Anchor Point	AK	12	2	17	179	4	10	346	0	0	0	0
Anchorage	AK	219	47	524	13,545	39	157	2,934	9	43	9	275
Angoon	AK	109	58	905	14,797	18	83	1,647	2	18	20	245
Atka	AK	1										
Auke Bay	AK	5										
Barrow	AK	1										
Bethel	AK	8	2	33	915	0	0	0	0	0	0	0
Chefornak	AK	14	8	75	1,081	0	0	0	3	3	3	23
Chenega Bay	AK	8	8	125	4,503	5	42	649	4	6	6	99
Chevak	AK	2										
Chignik	AK	10	4	31	901	0	0	0	0	0	0	0
Chignik Lagoon	AK	13	6	61	1,138	0	0	0	0	0	4	30
Chignik Lake	AK	4										
Chiniak	AK	18	13	164	2,524	3	5	105	0	0	0	0
Chugiak	AK	3										
Clarks Point	AK	1										
Coffman Cove	AK	46	22	121	2,211	15	84	1,050	4	15	8	65
Cold Bay	AK	35	21	185	2,968	14	23	333	2	39	3	11
Cordova	AK	557	235	1,596	28,428	106	240	5,837	19	33	46	243
Craig	AK	510	252	2,055	37,419	142	575	7,140	51	121	118	813
Dillingham	AK	30	1	0	0	1	3	147	0	0	0	0
Douglas	AK	17	2	49	125	2	18	47	0	0	0	0
Dutch Harbor	AK	80	39	462	8,615	32	168	2,227	1	36	3	263
Eagle River	AK	8	7	92	967	3	24	189	0	0	0	0
Edna Bay	AK	28	19	86	1,725	0	0	0	3	6	9	49
Eek	AK	6	5	5	131	0	0	0	0	0	0	0
Egegik	AK	1										

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Table E-4.–Page 2 of 5.

City	State	Number of SHARCs Issued[a]	Subsistence fished	Subsistence harvest		Sport fished	Sport harvest		Lingcod bycatch		Rockfish bycatch	
			Estimated number respondents	Estimated number halibut	Estimated pounds halibut	Estimated number respondents	Estimated number halibut	Estimated pounds halibut	Estimated number respondents	Estimated number lingcod	Estimated number respondents	Estimated number rockfish
Elfin Cove	AK	14	7	25	619	3	9	273	1	13	5	52
Elmemdorf AFB	AK	1										
Ester	AK	1										
Fairbanks	AK	7	2	9	219	0	0	0	0	0	0	0
False Pass	AK	1										
Fritz Creek	AK	1										
Gakona	AK	1										
Gambell	AK	1										
Girdwood	AK	1										
Glennallen	AK	1										
Golovin	AK	1										
Goodnews Bay	AK	4										
Gustavus	AK	58	26	112	2,234	17	93	1,541	0	0	0	0
Haines	AK	473	273	1,274	25,424	79	88	1,640	15	45	18	109
Hollis	AK	1										
Homer	AK	25	11	183	1,984	8	40	308	2	3	2	7
Hoonah	AK	236	91	853	15,651	29	131	1,987	0	0	5	27
Hooper Bay	AK	14	5	32	345	0	0	0	0	0	0	0
Hydaburg	AK	120	69	583	24,178	9	18	597	17	63	33	599
Hyder	AK	31	18	64	1,447	8	5	88	3	10	4	44
Juneau	AK	349	92	988	15,054	55	252	4,305	2	4	18	57
Kake	AK	110	45	503	11,307	10	25	877	5	61	14	120
Karluk	AK	9	5	36	417	0	0	0	1	2	4	48
Kasaan	AK	15	2	2	22	2	0	0	0	0	2	9
Kasilof	AK	13	12	262	2,997	4	51	470	4	26	2	34
Kenai	AK	108	18	244	7,243	22	66	1,436	2	8	0	0
Ketchikan	AK	571	198	2,211	40,799	137	541	10,384	24	110	70	461
King Cove	AK	87	49	510	7,871	15	72	1,119	6	63	6	57
King Salmon	AK	2										
Kipnuk	AK	12	13	273	2,230	0	0	0	0	0	0	0
Klawock	AK	237	88	838	18,824	44	223	3,193	27	109	43	522

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Table E-4.–Page 3 of 5.

City	State	Number of SHARCs Issued[a]	Subsistence fished	Subsistence harvest		Sport fished	Sport harvest		Lingcod bycatch		Rockfish bycatch	
			Estimated number respondents	Estimated number halibut	Estimated pounds halibut	Estimated number respondents	Estimated number halibut	Estimated pounds halibut	Estimated number respondents	Estimated number lingcod	Estimated number respondents	Estimated number rockfish
Klukwan	AK	2										
Kodiak	AK	1,702	900	8,445	164,092	539	2,580	47,646	105	375	187	2,271
Kongiganak	AK	6	2	7	175	0	0	0	0	0	0	0
Kotzebue	AK	1										
Kwigillingok	AK	3										
Larsen Bay	AK	33	23	173	3,297	11	65	1,707	5	40	5	43
Manokotak	AK	2										
Mekoryuk	AK	5										
Metlakatla	AK	193	64	707	15,784	22	41	620	26	115	26	337
Meyers Chuck	AK	8	7	34	1,147	0	0	0	0	0	3	18
Naknek	AK	9	3	0	0	0	0	0	0	0	0	0
Nanwalek	AK	48	20	567	9,743	2	5	53	4	33	4	130
Naukati	AK	25	15	136	2,349	8	41	441	2	12	8	146
Nelson Lagoon	AK	1										
Newtok	AK	1										
Nightmute	AK	2										
Nikiski	AK	9	0	0	0	2	6	68	0	0	0	0
Ninilchik	AK	38	6	200	4,216	14	51	673	0	0	0	0
Nome	AK	23	8	57	965	0	0	0	2	8	2	2
North Pole	AK	4										
Old Harbor	AK	41	29	252	5,026	7	19	209	4	9	8	100
Ouzinkie	AK	47	28	178	3,122	15	40	681	2	2	3	64
Palmer	AK	10	2	2	38	0	0	0	0	0	0	0
Pelican	AK	45	29	214	4,514	12	9	186	13	49	20	316
Perryville	AK	18	11	107	2,140	2	2	33	0	0	2	6
Petersburg	AK	961	409	2,817	47,266	256	820	13,251	5	8	54	258
Pilot Point	AK	2										
Point Baker	AK	20	16	89	1,932	1	1	24	4	9	10	120
Port Alexander	AK	28	23	191	4,942	5	7	233	8	30	10	120
Port Graham	AK	47	30	555	7,222	5	23	267	5	21	10	150
Port Heiden	AK	2										

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Table E-4.–Page 4 of 5.

City	State	Number of SHARCs Issued[a]	Subsistence fished	Subsistence harvest		Sport fished	Sport harvest		Lingcod bycatch		Rockfish bycatch	
			Estimated number respondents	Estimated number halibut	Estimated pounds halibut	Estimated number respondents	Estimated number halibut	Estimated pounds halibut	Estimated number respondents	Estimated number lingcod	Estimated number respondents	Estimated number rockfish
Port Lions	AK	39	27	253	3,932	23	158	2,684	6	75	4	68
Port Protection	AK	2										
Port William	AK	1										
Quinhagak	AK	5										
Sand Point	AK	130	61	559	7,306	18	58	1,129	2	2	13	151
Savoonga	AK	17	6	42	1,270	0	0	0	2	15	2	17
Saxman	AK	12	0	0	0	0	0	0	0	0	0	0
Seldovia	AK	152	86	1,155	17,888	31	172	2,650	6	26	9	42
Seward	AK	12	2	9	239	0	0	0	0	0	2	17
Sitka	AK	1,635	755	3,951	82,728	228	539	9,257	263	931	355	2,805
Skagway	AK	56	40	111	2,109	13	38	916	0	0	0	0
Soldotna	AK	44	13	1,813	3,797	8	23	437	0	0	0	0
St. George Island	AK	4										
St. Paul Island	AK	41	19	485	10,139	0	0	0	0	0	0	0
Sterling	AK	4										
Tatitlek	AK	15	11	151	2,019	0	0	0	5	23	7	59
Teller	AK	10	0	0	0	0	0	0	0	0	0	0
Tenakee Springs	AK	53	26	138	2,668	15	38	504	0	0	7	28
Thorne Bay	AK	114	77	479	11,910	37	279	3,980	9	14	28	177
Togiak	AK	4										
Toksook Bay	AK	32	10	105	875	0	0	0	0	0	0	0
Trapper Creek	AK	1										
Tununak	AK	11	9	91	576	0	0	0	0	0	0	0
Twin Hills	AK	2										
Unalakleet	AK	1										
Unalaska	AK	75	53	356	4,465	22	48	503	3	8	10	53
Valdez	AK	38	12	80	2,424	6	23	537	6	8	8	31
Ward Cove	AK	32	6	27	986	5	6	202	0	0	4	24
Wasilla	AK	43	4	23	94	2	0	0	0	0	0	0
Whale Pass	AK	8	6	6	165	2	2	56	0	0	0	0
Whittier	AK	2										

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Table E-4.–Page 5 of 5.

City	State	Number of SHARCs Issued[a]	Subsistence fished	Subsistence harvest		Sport fished	Sport harvest		Lingcod bycatch		Rockfish bycatch	
			Estimated number respondents	Estimated number halibut	Estimated pounds halibut	Estimated number respondents	Estimated number halibut	Estimated pounds halibut	Estimated number respondents	Estimated number lingcod	Estimated number respondents	Estimated number rockfish
Willow	AK	2										
Wrangell	AK	476	256	1,928	36,080	115	248	4,992	9	54	36	284
Yakutat	AK	110	50	624	15,247	12	57	1,004	26	139	15	563
Alaska subtotal		**10,804**	**4,982**	**43,312**	**796,957**	**2,267**	**8,455**	**145,903**	**732**	**2,864**	**1,320**	**12,839**
Non-Alaska subtotal		**149**	**9**	**20**	**603**	**30**	**196**	**3,338**	**0**	**0**	**2**	**12**
Total		**10,953**	**4,991**	**43,332**	**797,560**	**2,297**	**8,651**	**149,241**	**732**	**2,864**	**1,322**	**12,851**

a. To protect confidentiality, data for tribes and communities with 5 or fewer SHARCs issued are not reported in this table. Subtotals include all tribes and communities. Blank cells indicate redacted data.

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Appendix E-5.–Estimated subsistence harvests of halibut by gear type and place of residence.

			Estimated harvests by gear type								
			Set hook gear			Hook and line or handline			All gear		
City	State	Number of SHARCs issued[a]	Estimated number respondents fished	Estimated number fish harvested	Estimated pounds fish harvested	Estimated number respondents fished	Estimated number fish harvested	Estimated pounds fish harvested	Estimated number respondents fished	Estimated number fish harvested	Estimated pounds fish harvested
Adak	AK	8	5	34	515	3	2	43	5	36	559
Akhiok	AK	6	0	0	0	5	36	1,008	5	36	1,008
Akiachak	AK	1									
Akutan	AK	16	3	6	147	9	84	1,512	9	90	1,659
Aleknagik	AK	3									
Anchor Point	AK	12	2	17	179	0	0	0	2	17	179
Anchorage	AK	219	30	340	10,431	26	183	3,113	47	524	13,545
Angoon	AK	109	45	646	9,435	23	259	5,362	58	905	14,797
Atka	AK	1									
Auke Bay	AK	5									
Barrow	AK	1									
Bethel	AK	8	0	0	0	2	33	915	2	33	915
Chefornak	AK	14	0	0	0	8	75	1,081	8	75	1,081
Chenega Bay	AK	8	8	111	4,032	7	14	471	8	125	4,503
Chevak	AK	2									
Chignik	AK	10	3	10	366	4	21	535	4	31	901
Chignik Lagoon	AK	13	2	21	591	6	40	547	6	61	1,138
Chignik Lake	AK	4									
Chiniak	AK	18	13	124	1,880	6	40	644	13	164	2,524
Chugiak	AK	3									
Clarks Point	AK	1									
Coffman Cove	AK	46	12	51	1,113	13	71	1,098	22	121	2,211
Cold Bay	AK	35	19	164	2,532	10	21	436	21	185	2,968
Cordova	AK	557	207	1,289	22,579	121	307	5,849	235	1,596	28,428
Craig	AK	510	224	1,714	33,057	73	341	4,363	252	2,055	37,419
Dillingham	AK	30	1	0	0	0	0	0	1	0	0
Douglas	AK	17	2	22	63	2	27	63	2	49	125
Dutch Harbor	AK	80	22	229	4,845	23	233	3,770	39	462	8,615

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Table E-5.–Page 2 of 5.

			Estimated harvests by gear type								
			Set hook gear			Hook and line or handline			All gear		
City	State	Number of SHARCs issued[a]	Estimated number respondents fished	Estimated number fish harvested	Estimated pounds fish harvested	Estimated number respondents fished	Estimated number fish harvested	Estimated pounds fish harvested	Estimated number respondents fished	Estimated number fish harvested	Estimated pounds fish harvested
Eagle River	AK	8	5	44	480	5	48	487	7	92	967
Edna Bay	AK	28	19	86	1,725	0	0	0	19	86	1,725
Eek	AK	6	0	0	0	5	5	131	5	5	131
Egegik	AK	1									
Elfin Cove	AK	14	7	21	510	4	4	109	7	25	619
Elmemdorf AFB	AK	1									
Ester	AK	1									
Fairbanks	AK	7	2	9	219	0	0	0	2	9	219
False Pass	AK	1									
Fritz Creek	AK	1									
Gakona	AK	1									
Gambell	AK	1									
Girdwood	AK	1									
Glennallen	AK	1									
Golovin	AK	1									
Goodnews Bay	AK	4									
Gustavus	AK	58	14	64	1,434	14	48	800	26	112	2,234
Haines	AK	473	267	1,221	24,530	62	53	895	273	1,274	25,424
Hollis	AK	1									
Homer	AK	25	5	24	293	8	160	1,691	11	183	1,984
Hoonah	AK	236	69	656	11,979	44	197	3,672	91	853	15,651
Hooper Bay	AK	14	0	0	0	5	32	345	5	32	345
Hydaburg	AK	120	62	532	21,080	24	52	3,098	69	583	24,178
Hyder	AK	31	18	58	1,346	9	6	102	18	64	1,447
Juneau	AK	349	72	628	12,087	41	360	2,967	92	988	15,054
Kake	AK	110	45	484	10,626	8	19	682	45	503	11,307
Karluk	AK	9	1	0	0	5	36	417	5	36	417
Kasaan	AK	15	2	0	0	2	2	22	2	2	22
Kasilof	AK	13	8	218	2,379	7	44	618	12	262	2,997

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Table E-5.–Page 3 of 5.

			Estimated harvests by gear type								
			Set hook gear			Hook and line or handline			All gear		
City	State	Number of SHARCs issued[a]	Estimated number respondents fished	Estimated number fish harvested	Estimated pounds fish harvested	Estimated number respondents fished	Estimated number fish harvested	Estimated pounds fish harvested	Estimated number respondents fished	Estimated number fish harvested	Estimated pounds fish harvested
Kenai	AK	108	7	41	853	16	203	6,390	18	244	7,243
Ketchikan	AK	571	164	1,612	32,300	80	599	8,499	198	2,211	40,799
King Cove	AK	87	20	196	2,507	39	314	5,364	49	510	7,871
King Salmon	AK	2									
Kipnuk	AK	12	0	0	0	13	273	2,230	13	273	2,230
Klawock	AK	237	65	502	14,111	40	336	4,713	88	838	18,824
Klukwan	AK	2									
Kodiak	AK	1,702	747	6,602	127,816	374	1,843	36,275	900	8,445	164,092
Kongiganak	AK	6	0	0	0	2	7	175	2	7	175
Kotzebue	AK	1									
Kwigillingok	AK	3									
Larsen Bay	AK	33	7	59	895	22	113	2,403	23	173	3,297
Manokotak	AK	2									
Mekoryuk	AK	5									
Metlakatla	AK	193	56	667	15,251	17	41	533	64	707	15,784
Meyers Chuck	AK	8	7	33	1,133	2	1	14	7	34	1,147
Naknek	AK	9	3	0	0	0	0	0	3	0	0
Nanwalek	AK	48	12	392	7,194	16	175	2,549	20	567	9,743
Naukati	AK	25	15	101	1,979	6	35	369	15	136	2,349
Nelson Lagoon	AK	1									
Newtok	AK	1									
Nightmute	AK	2									
Nikiski	AK	9	0	0	0	0	0	0	0	0	0
Ninilchik	AK	38	2	32	890	6	168	3,325	6	200	4,216
Nome	AK	23	8	57	965	0	0	0	8	57	965
North Pole	AK	4									
Old Harbor	AK	41	14	111	1,733	24	141	3,293	29	252	5,026
Ouzinkie	AK	47	18	109	2,066	18	69	1,057	28	178	3,122
Palmer	AK	10	2	2	38	0	0	0	2	2	38

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Table E-5.–Page 4 of 5.

			Estimated harvests by gear type								
			Set hook gear			Hook and line or handline			All gear		
City	State	Number of SHARCs issued[a]	Estimated number respondents fished	Estimated number fish harvested	Estimated pounds fish harvested	Estimated number respondents fished	Estimated number fish harvested	Estimated pounds fish harvested	Estimated number respondents fished	Estimated number fish harvested	Estimated pounds fish harvested
Pelican	AK	45	27	177	3,570	18	38	944	29	214	4,514
Perryville	AK	18	9	86	1,667	8	20	473	11	107	2,140
Petersburg	AK	961	323	1,936	33,951	209	881	13,315	409	2,817	47,266
Pilot Point	AK	2									
Point Baker	AK	20	14	64	1,413	7	24	519	16	89	1,932
Port Alexander	AK	28	23	174	4,624	5	17	318	23	191	4,942
Port Graham	AK	47	23	340	5,011	18	216	2,211	30	555	7,222
Port Heiden	AK	2									
Port Lions	AK	39	18	166	2,448	13	86	1,484	27	253	3,932
Port Protection	AK	2									
Port William	AK	1									
Quinhagak	AK	5									
Sand Point	AK	130	22	316	3,408	50	243	3,898	61	559	7,306
Savoonga	AK	17	4	36	942	2	6	328	6	42	1,270
Saxman	AK	12	0	0	0	0	0	0	0	0	0
Seldovia	AK	152	60	675	11,198	49	480	6,691	86	1,155	17,888
Seward	AK	12	0	0	0	2	9	239	2	9	239
Sitka	AK	1,635	700	3,460	74,394	218	491	8,334	755	3,951	82,728
Skagway	AK	56	34	76	1,603	19	35	506	40	111	2,109
Soldotna	AK	44	6	849	1,330	13	964	2,467	13	1,813	3,797
St. George Island	AK	4									
St. Paul Island	AK	41	13	468	9,555	6	16	584	19	485	10,139
Sterling	AK	4									
Tatitlek	AK	15	11	151	2,019	0	0	0	11	151	2,019
Teller	AK	10	0	0	0	0	0	0	0	0	0
Tenakee Springs	AK	53	20	97	1,950	11	42	718	26	138	2,668
Thorne Bay	AK	114	68	368	9,801	42	111	2,109	77	479	11,910
Togiak	AK	4									
Toksook Bay	AK	32	5	38	315	10	67	560	10	105	875

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Table E-5.–Page 5 of 5.

			Estimated harvests by gear type								
			Set hook gear			Hook and line or handline			All gear		
City	State	Number of SHARCs issued[a]	Estimated number respondents fished	Estimated number fish harvested	Estimated pounds fish harvested	Estimated number respondents fished	Estimated number fish harvested	Estimated pounds fish harvested	Estimated number respondents fished	Estimated number fish harvested	Estimated pounds fish harvested
Trapper Creek	AK	1									
Tununak	AK	11	0	0	0	9	91	576	9	91	576
Twin Hills	AK	2									
Unalakleet	AK	1									
Unalaska	AK	75	36	213	2,572	36	143	1,893	53	356	4,465
Valdez	AK	38	10	53	1,701	6	27	723	12	80	2,424
Ward Cove	AK	32	6	27	986	2	0	0	6	27	986
Wasilla	AK	43	4	23	94	4	0	0	4	23	94
Whale Pass	AK	8	4	6	165	4	0	0	6	6	165
Whittier	AK	2									
Willow	AK	2									
Wrangell	AK	476	218	1,503	28,938	112	425	7,143	256	1,928	36,080
Yakutat	AK	110	45	487	11,932	21	136	3,316	50	624	15,247
Alaska subtotal		**10,804**	**4,064**	**31,404**	**610,563**	**2,181**	**11,908**	**186,393**	**4,982**	**43,312**	**796,957**
Non-Alaska subtotal		**149**	**6**	**12**	**429**	**2**	**7**	**174**	**9**	**20**	**603**
Total		**10,953**	**4,071**	**31,416**	**610,992**	**2,183**	**11,916**	**186,567**	**4,991**	**43,332**	**797,560**

a. To protect confidentiality, data for tribes and communities with 5 or fewer SHARCs issued are not reported in this table. Subtotals include all tribes and communities. Blank cells indicate redacted data.

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Appendix E-**6**.–Estimated number of respondents that subsistence or sport fished, by place of residence.

City	State	Number of SHARCs issued[a]	Estimated number subsistence or sport fished
Adak	AK	8	5
Akhiok	AK	6	5
Akiachak	AK	1	0
Akutan	AK	16	9
Aleknagik	AK	3	0
Anchor Point	AK	12	4
Anchorage	AK	219	66
Angoon	AK	109	63
Atka	AK	1	0
Auke Bay	AK	5	4
Barrow	AK	1	2
Bethel	AK	8	2
Chefornak	AK	14	8
Chenega Bay	AK	8	9
Chevak	AK	2	0
Chignik	AK	10	4
Chignik Lagoon	AK	13	6
Chignik Lake	AK	4	10
Chiniak	AK	18	13
Chugiak	AK	3	2
Clarks Point	AK	1	0
Coffman Cove	AK	46	27
Cold Bay	AK	35	25
Cordova	AK	557	261
Craig	AK	510	306
Dillingham	AK	30	1
Douglas	AK	17	2
Dutch Harbor	AK	80	47
Eagle River	AK	8	7
Edna Bay	AK	28	19
Eek	AK	6	5
Egegik	AK	1	0
Elfin Cove	AK	14	8
Elmemdorf AFB	AK	1	0
Ester	AK	1	1
Fairbanks	AK	7	2
False Pass	AK	1	1
Fritz Creek	AK	1	2
Gakona	AK	1	0
Gambell	AK	1	0
Girdwood	AK	1	0
Glennallen	AK	1	0
Golovin	AK	1	0
Goodnews Bay	AK	4	2
Gustavus	AK	58	41

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City	State	Number of SHARCs issued[a]	Estimated number subsistence or sport fished
Haines	AK	473	289
Hollis	AK	1	0
Homer	AK	25	14
Hoonah	AK	236	106
Hooper Bay	AK	14	5
Hydaburg	AK	120	69
Hyder	AK	31	18
Juneau	AK	349	126
Kake	AK	110	45
Karluk	AK	9	5
Kasaan	AK	15	2
Kasilof	AK	13	14
Kenai	AK	108	35
Ketchikan	AK	571	263
King Cove	AK	87	55
King Salmon	AK	2	0
Kipnuk	AK	12	13
Klawock	AK	237	107
Klukwan	AK	2	0
Kodiak	AK	1,702	1,074
Kongiganak	AK	6	2
Kotzebue	AK	1	0
Kwigillingok	AK	3	0
Larsen Bay	AK	33	23
Manokotak	AK	2	0
Mekoryuk	AK	5	4
Metlakatla	AK	193	73
Meyers Chuck	AK	8	7
Naknek	AK	9	3
Nanwalek	AK	48	20
Naukati	AK	25	16
Nelson Lagoon	AK	1	0
Newtok	AK	1	0
Nightmute	AK	2	1
Nikiski	AK	9	2
Ninilchik	AK	38	20
Nome	AK	23	8
North Pole	AK	4	0
Old Harbor	AK	41	29
Ouzinkie	AK	47	30
Palmer	AK	10	2
Pelican	AK	45	31
Perryville	AK	18	11
Petersburg	AK	961	501
Pilot Point	AK	2	0

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Table E-6.–Page 3 of 3.

City	State	Number of SHARCs issued[a]	Estimated number subsistence or sport fished
Point Baker	AK	20	16
Port Alexander	AK	28	24
Port Graham	AK	47	30
Port Heiden	AK	2	0
Port Lions	AK	39	32
Port Protection	AK	2	0
Port William	AK	1	2
Quinhagak	AK	5	3
Sand Point	AK	130	67
Savoonga	AK	17	6
Saxman	AK	12	0
Seldovia	AK	152	93
Seward	AK	12	2
Sitka	AK	1,635	849
Skagway	AK	56	45
Soldotna	AK	44	19
St. George Island	AK	4	6
St. Paul Island	AK	41	19
Sterling	AK	4	2
Tatitlek	AK	15	11
Teller	AK	10	0
Tenakee Springs	AK	53	34
Thorne Bay	AK	114	86
Togiak	AK	4	0
Toksook Bay	AK	32	10
Trapper Creek	AK	1	0
Tununak	AK	11	9
Twin Hills	AK	2	0
Unalakleet	AK	1	0
Unalaska	AK	75	56
Valdez	AK	38	15
Ward Cove	AK	32	9
Wasilla	AK	43	4
Whale Pass	AK	8	6
Whittier	AK	2	0
Willow	AK	2	0
Wrangell	AK	476	293
Yakutat	AK	110	56
Alaska subtotal		**10,804**	**5,796**
Non-Alaska subtotal		**149**	**39**
Total		**10,953**	**5,835**

a. To protect confidentiality, data for tribes and communities with 5 or fewer SHARCs issued are not reported in this table. Subtotals include all tribes and communities. Blank cells indicate redacted data.

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Appendix E-7.–Estimated subsistence harvests of halibut and sport harvests of halibut, pounds (net weight), and incidental harvests of lingcod and rockfish, by eligible Alaska tribe and eligible Alaska rural community, 2009.

		Return rate			Subsistence fished halibut		Subsistence halibut harvest		Sport fished halibut		Sport halibut harvest		Lingcod bycatch		Rockfish bycatch	
Tribal name	Regulatory area	SHARCs issued[a]	Surveys returned	Percent	Estimated number respondents	Percent of SHARCs	Estimated number fish	Estimated pounds	Estimated number respondents	Percent of SHARCs	Estimated number fish	Estimated pounds	Estimated number respondents	Estimated number fish	Estimated number respondents	Estimated number fish
Angoon Community Association	2C	92	73	79.3%	42	46.0%	609	9,033	10	10.6%	52	1,131	1	6	13	118
Aukquan Traditional Council	2C	1														
Central Council Tlingit and Haida Indian Tribes	2C	488	215	44.1%	184	37.6%	2,060	33,397	84	17.1%	373	5,688	16	125	43	381
Chilkat Indian Village	2C	23	17	73.9%	5	22.5%	53	702	1	5.6%	13	36	1	3	1	8
Chilkoot Indian Association	2C	48	22	45.8%	21	44.5%	111	3,661	4	8.9%	6	165	0	0	0	0
Craig Community Association	2C	63	33	52.4%	24	38.8%	286	5,776	0	0.0%	0	0	0	0	9	58
Douglas Indian Association	2C	16	3	18.8%	0	0.0%	0	0	0	0.0%	0	0	0	0	0	0
Hoonah Indian Association	2C	141	68	48.2%	51	36.0%	505	10,356	10	7.2%	10	185	0	0	2	10
Hydaburg Cooperative Association	2C	124	108	87.1%	63	51.0%	535	22,627	6	4.6%	10	302	16	57	31	584
Ketchikan Indian Corporation	2C	503	319	63.4%	136	27.0%	1,515	30,385	102	20.2%	243	4,522	16	78	49	325
Klawock Cooperative Association	2C	80	31	38.8%	27	34.2%	171	4,025	7	9.3%	7	209	5	52	12	221
Metlakatla Indian Community, Annette Island Reserve	2C	172	76	44.2%	52	30.0%	601	13,316	18	10.4%	25	498	22	108	25	334
Organized Village of Kake	2C	80	54	67.5%	26	32.9%	241	5,517	1	1.8%	1	41	1	1	4	25
Organized Village of Kasaan	2C	8	4	50.0%	3	37.5%	12	337	3	37.5%	6	126	0	0	2	9
Organized Village of Saxman	2C	37	18	48.6%	22	59.5%	240	3,507	12	32.4%	154	3,444	2	10	4	8

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Table E-7.–Page 2 of 10.

		Return rate			Subsistence fished halibut		Subsistence halibut harvest		Sport fished halibut		Sport halibut harvest		Lingcod bycatch		Rockfish bycatch	
Tribal name	Regulatory area	SHARCs issued[a]	Surveys returned	Percent	Estimated number respondents	Percent of SHARCs	Estimated number fish	Estimated pounds	Estimated number respondents	Percent of SHARCs	Estimated number fish	Estimated pounds	Estimated number respondents	Estimated number fish	Estimated number respondents	Estimated number fish
Petersburg Indian Association	2C	73	40	54.8%	27	37.5%	241	3,803	20	27.5%	53	920	0	0	2	9
Sitka Tribe of Alaska	2C	289	152	52.6%	131	45.4%	752	15,669	15	5.2%	21	211	30	113	45	396
Skagway Village	2C	3														
Wrangell Cooperative Association	2C	94	62	66.0%	42	45.1%	309	6,809	17	17.9%	55	1,175	2	2	9	92
Subtotal, Area 2C		**2,335**	**1,298**	**55.6%**	**859**	**36.8%**	**8,245**	**168,965**	**310**	**13.3%**	**1,032**	**18,652**	**112**	**556**	**252**	**2,578**
Kenaitze Indian Tribe	3A	123	61	49.6%	27	22.2%	337	8,450	20	15.9%	57	1,256	4	12	0	0
Lesnoi Village (Woody Island)	3A	71	39	54.9%	7	10.3%	51	969	4	5.1%	5	121	4	5	4	27
Native Village of Afognak	3A	24	14	58.3%	15	61.6%	121	1,411	5	20.5%	12	207	0	0	2	20
Native Village of Akhiok	3A	9	2	22.2%	9	100.0%	59	1,096	5	50.0%	9	38	0	0	5	45
Native Village of Chenega	3A	17	8	47.1%	9	50.0%	123	5,221	4	25.0%	6	238	6	9	9	106
Native Village of Eyak	3A	80	41	51.3%	30	36.9%	355	4,830	13	16.6%	25	1,456	4	6	8	59
Native Village of Karluk	3A	4														
Native Village of Larsen Bay	3A	37	20	54.1%	27	73.0%	254	4,047	14	38.9%	110	3,345	7	76	7	79
Native Village of Nanwalek	3A	44	18	40.9%	18	40.9%	337	6,015	1	2.3%	4	39	4	33	3	110
Native Village of Ouzinkie	3A	37	17	45.9%	17	45.8%	136	2,623	11	30.5%	32	659	2	2	2	38
Native Village of Port Graham	3A	43	25	58.1%	23	54.4%	522	11,501	5	12.4%	23	267	4	23	6	310
Native Village of Port Lions	3A	32	22	68.8%	19	59.1%	170	3,019	12	36.4%	63	1,364	3	32	3	44
Native Village of Tatitlek	3A	23	11	47.8%	10	45.5%	146	2,064	2	9.1%	13	293	2	6	6	21
Ninilchik Village	3A	81	40	49.4%	20	25.0%	1,980	8,773	22	27.5%	81	943	0	0	0	0
Seldovia Village Tribe	3A	63	35	55.6%	28	44.9%	464	7,305	7	10.8%	22	209	2	3	7	44

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Table E-7.–Page 3 of 10.

		Return rate			Subsistence fished halibut		Subsistence halibut harvest		Sport fished halibut		Sport halibut harvest		Lingcod bycatch		Rockfish bycatch	
Tribal name	Regulatory area	SHARCs issued[a]	Surveys returned	Percent	Estimated number respondents	Percent of SHARCs	Estimated number fish	Estimated pounds	Estimated number respondents	Percent of SHARCs	Estimated number fish	Estimated pounds	Estimated number respondents	Estimated number fish	Estimated number respondents	Estimated number fish
Sun'aq Tribe of Kodiak (formerly Shoonaq')	3A	126	48	38.1%	68	54.0%	612	15,357	24	18.7%	157	2,783	10	21	16	175
Village of Kanatak	3A	18	5	27.8%	0	0.0%	0	0	0	0.0%	0	0	0	0	0	0
Village of Old Harbor	3A	46	19	41.3%	20	42.5%	127	3,222	2	5.3%	10	171	2	2	2	49
Village of Salamatoff	3A	21	13	61.9%	5	22.6%	86	902	2	7.5%	5	166	0	0	0	0
Yakutat Tlingit Tribe	3A	41	21	51.2%	20	49.8%	368	8,553	0	0.0%	0	0	9	78	6	433
Subtotal, Area 3A		**940**	**459**	**48.8%**	**372**	**39.6%**	**6,247**	**95,359**	**153**	**16.2%**	**632**	**13,555**	**63**	**308**	**84**	**1,560**
Agdaagux Tribe of King Cove	3B	72	38	52.8%	41	56.5%	434	6,085	14	19.0%	93	1,406	2	58	2	39
Chignik Lake Village	3B	11	1	9.1%	10	90.9%	60	700	0	0.0%	0	0	0	0	0	0
Ivanoff Bay Village	3B	8	4	50.0%	4	50.0%	4	84	4	50.0%	12	490	2	12	0	0
Native Village of Belkofski	3B	5														
Native Village of Chignik	3B	7	7	100.0%	1	14.3%	5	77	0	0.0%	0	0	0	0	0	0
Native Village of Chignik Lagoon	3B	20	9	45.0%	11	52.8%	87	1,626	2	10.6%	4	118	0	0	4	30
Native Village of False Pass	3B	1														
Native Village of Nelson Lagoon	3B	3														
Native Village of Perryville	3B	22	14	63.6%	13	57.1%	112	2,228	2	7.1%	2	33	0	0	2	6
Native Village of Unga	3B	8	3	37.5%	3	33.3%	5	93	5	66.7%	5	299	0	0	0	0
Pauloff Harbor Village	3B	48	14	29.2%	21	42.9%	309	3,144	10	21.4%	48	996	0	0	0	0
Qagan Toyagungin Tribe of Sand Point Village	3B	86	46	53.5%	32	37.0%	194	3,206	2	2.2%	2	26	4	6	9	64
Subtotal, Area 3B		**291**	**141**	**48.5%**	**134**	**46.0%**	**1,209**	**17,243**	**39**	**13.4%**	**166**	**3,368**	**8**	**76**	**17**	**138**

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Table E-7.–Page 4 of 10.

		Return rate			Subsistence fished halibut		Subsistence halibut harvest		Sport fished halibut		Sport halibut harvest		Lingcod bycatch		Rockfish bycatch	
Tribal name	Regulatory area	SHARCs issued[a]	Surveys returned	Percent	Estimated number respondents	Percent of SHARCs	Estimated number fish	Estimated pounds	Estimated number respondents	Percent of SHARCs	Estimated number fish	Estimated pounds	Estimated number respondents	Estimated number fish	Estimated number respondents	Estimated number fish
Native Village of Akutan	4A	21	7	33.3%	9	42.9%	90	1,659	3	14.3%	9	84	3	15	6	90
Qawalingin Tribe of Unalaska	4A	36	13	36.1%	20	56.0%	107	1,363	6	15.4%	6	39	0	0	6	33
Subtotal, Area 4A		**57**	**20**	**35.1%**	**29**	**51.2%**	**197**	**3,022**	**9**	**15.0%**	**15**	**123**	**3**	**15**	**12**	**123**
Native Village of Atka	4B	5														
Subtotal, Area 4B		**5**														
Pribilof Islands Aleut Community of St. George	4C	6	4	66.7%	6	100.0%	30	720	0	0.0%	0	0	2	5	3	50
Pribilof Islands Aleut Community of St. Paul	4C	42	13	31.0%	19	46.2%	485	10,139	0	0.0%	0	0	0	0	0	0
Subtotal, Area 4C		**48**	**17**	**35.4%**	**25**	**52.9%**	**515**	**10,859**	**0**	**0.0%**	**0**	**0**	**2**	**5**	**3**	**50**
Native Village of Diomede (Inalik)	4D	1														
Native Village of Gambell	4D	1														
Native Village of Savoonga	4D	18	10	55.6%	6	31.5%	42	1,270	0	0.0%	0	0	2	15	2	17
Subtotal, Area 4D		**20**	**11**	**55.0%**	**7**	**33.3%**	**42**	**1,270**	**0**	**0.0%**	**0**	**0**	**2**	**15**	**2**	**17**
Chevak Native Village (Kashunamiut)	4E	3														
Chinik Eskimo Community	4E	1														
Egegik Village	4E	1														
King Island Native Community	4E	1														
Levelock Village	4E	1														
Manokotak Village	4E	1														
Naknek Native Village	4E	8	1	12.5%	0	0.0%	0	0	0	0.0%	0	0	0	0	0	0

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Table E-7.–Page 5 of 10.

Tribal name	Regulatory area	Return rate			Subsistence fished halibut		Subsistence halibut harvest		Sport fished halibut		Sport halibut harvest		Lingcod bycatch		Rockfish bycatch	
		SHARCs issued[a]	Surveys returned	Percent	Estimated number respondents	Percent of SHARCs	Estimated number fish	Estimated pounds	Estimated number respondents	Percent of SHARCs	Estimated number fish	Estimated pounds	Estimated number respondents	Estimated number fish	Estimated number respondents	Estimated number fish
Native Village of Aleknagik	4E	6	3	50.0%	0	0.0%	0	0	0	0.0%	0	0	0	0	0	0
Native Village of Brevig Mission	4E	1														
Native Village of Council	4E	4														
Native Village of Dillingham (Curyung)	4E	16	7	43.8%	2	14.3%	5	480	5	28.6%	14	286	0	0	0	0
Native Village of Eek	4E	7	3	42.9%	7	100.0%	37	1,045	0	0.0%	0	0	0	0	0	0
Native Village of Goodnews Bay (Mumtraq)	4E	4														
Native Village of Hooper Bay	4E	16	6	37.5%	5	33.3%	32	345	0	0.0%	0	0	0	0	0	0
Native Village of Kanakanak	4E	1														
Native Village of Kipnuk	4E	13	2	15.4%	13	100.0%	273	2,230	0	0.0%	0	0	0	0	0	0
Native Village of Kongiganak	4E	5														
Native Village of Koyuk	4E	1														
Native Village of Kwigillingok	4E	4														
Native Village of Kwinhagak	4E	3														
Native Village of Mekoryuk	4E	6	3	50.0%	4	66.7%	52	574	2	33.3%	12	210	0	0	0	0
Native Village of Nightmute	4E	1														
Native Village of Scammon Bay	4E	3														
Native Village of Shaktoolik	4E	1														
Native Village of Toksook Bay (Nunakauyak)	4E	33	12	36.4%	10	30.3%	105	875	0	0.0%	0	0	0	0	0	0

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Table E-7.–Page 6 of 10.

Tribal name	Regulatory area	Return rate			Subsistence fished halibut		Subsistence halibut harvest		Sport fished halibut		Sport halibut harvest		Lingcod bycatch		Rockfish bycatch	
		SHARCs issued[a]	Surveys returned	Percent	Estimated number respondents	Percent of SHARCs	Estimated number fish	Estimated pounds	Estimated number respondents	Percent of SHARCs	Estimated number fish	Estimated pounds	Estimated number respondents	Estimated number fish	Estimated number respondents	Estimated number fish
Native Village of Tununak	4E	13	3	23.1%	9	66.7%	91	576	0	0.0%	0	0	0	0	0	0
Native Village of Unalakleet	4E	3														
Native Village of Wales	4E	1														
Newtok Village	4E	1														
Nome Eskimo Community	4E	15	8	53.3%	4	25.0%	26	630	2	12.5%	19	263	2	8	4	6
Orutsararmuit Native Village	4E	9	3	33.3%	3	33.3%	54	483	3	33.3%	24	189	0	0	0	0
South Naknek Village	4E	1														
Stebbins Community Association	4E	4														
Traditional Village of Togiak	4E	3														
Twin Hills Village	4E	1														
Ugashik Village	4E	2														
Village of Chefornak	4E	14	6	42.9%	8	55.7%	75	1,081	0	0.0%	0	0	3	3	3	23
Village of Clark's Point	4E	1														
Village of Kotlik	4E	1														
Subtotal, Area 4E		**210**	**77**	**36.7%**	**73**	**34.8%**	**911**	**11,589**	**17**	**8.3%**	**106**	**1,518**	**4**	**10**	**6**	**29**
Tribal subtotal		**3,906**	**2,025**	**51.8%**	**1,502**	**38.5%**	**17,384**	**308,569**	**530**	**13.6%**	**1,953**	**37,268**	**194**	**984**	**376**	**4,496**

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Table E-7.–Page 7 of 10.

		Return rate			Subsistence fished halibut		Subsistence halibut harvest		Sport fished halibut		Sport halibut harvest		Lingcod bycatch		Rockfish bycatch	
Rural community	Regulatory area	SHARCs issued[a]	Surveys returned	Percent	Estimated number respondents	Percent of SHARCs	Estimated number fish	Estimated pounds	Estimated number respondents	Percent of SHARCs	Estimated number fish	Estimated pounds	Estimated number respondents	Estimated number fish	Estimated number respondents	Estimated number fish
Angoon	2C	16	16	100.0%	9	56.3%	285	5,655	4	25.0%	11	140	1	12	4	118
Coffman Cove	2C	49	41	83.7%	23	47.8%	129	2,409	19	38.1%	121	1,339	4	15	8	65
Craig	2C	376	238	63.3%	172	45.7%	1,405	23,563	123	32.7%	561	6,953	44	102	85	642
Edna Bay	2C	37	24	64.9%	24	65.9%	112	2,228	0	0.0%	0	0	4	17	13	98
Elfin Cove	2C	15	11	73.3%	7	43.3%	25	619	3	17.3%	9	273	1	13	5	52
Gustavus	2C	61	45	73.8%	27	44.4%	121	2,396	20	32.6%	116	1,864	0	0	0	0
Haines	2C	426	309	72.5%	252	59.1%	1,080	21,753	90	21.1%	146	2,823	15	45	18	109
Hollis	2C	44	35	79.5%	20	44.3%	114	4,593	6	13.0%	10	137	0	0	5	10
Hoonah	2C	99	80	80.8%	40	40.3%	350	5,200	20	20.3%	121	1,802	0	0	3	17
Hydaburg	2C	10	8	80.0%	6	56.3%	48	1,551	3	33.8%	8	295	1	6	2	15
Hyder	2C	32	24	75.0%	18	55.2%	64	1,447	8	23.6%	5	88	3	10	4	44
Juneau	2C	3														
Kake	2C	35	27	77.1%	17	49.6%	174	5,358	7	21.3%	33	992	1	4	7	73
Kasaan	2C	8	4	50.0%	4	43.8%	4	110	0	0.0%	0	0	0	0	0	0
Ketchikan	2C	5														
Klawock	2C	155	102	65.8%	65	41.8%	640	9,826	45	29.3%	227	3,026	28	74	39	335
Klukwan	2C	2														
Metlakatla	2C	32	21	65.6%	12	38.5%	106	2,468	7	22.4%	25	393	3	8	2	3
Meyers Chuck	2C	9	9	100.0%	7	77.8%	34	1,147	0	0.0%	0	0	0	0	3	18
Naukati Bay	2C	40	30	75.0%	24	60.4%	56	1,590	16	39.6%	75	1,915	0	0	11	29
Pelican	2C	40	27	67.5%	23	57.4%	125	2,665	10	25.1%	9	186	9	13	16	151
Petersburg	2C	875	623	71.2%	384	43.8%	2,574	43,749	238	27.2%	768	12,217	5	8	56	271
Port Alexander	2C	26	15	57.7%	20	76.9%	140	3,768	5	19.2%	7	233	8	30	10	120
Port Protection	2C	16	11	68.8%	12	77.8%	121	2,347	3	19.4%	0	0	6	11	11	106
Pt. Baker	2C	15	11	73.3%	10	63.6%	34	919	1	9.1%	1	24	1	1	4	45
Saxman	2C	11	6	54.5%	3	30.3%	283	2,158	2	15.2%	25	233	3	33	3	117
Sitka	2C	1,363	872	64.0%	632	46.3%	3,349	69,779	222	16.3%	534	9,405	231	802	307	2,402
Skagway	2C	51	36	70.6%	35	68.6%	87	1,785	13	24.7%	38	916	0	0	0	0
Tenakee Springs	2C	53	46	86.8%	26	49.1%	138	2,668	15	27.9%	38	504	0	0	7	28
Thorne Bay	2C	119	90	75.6%	76	63.6%	477	11,849	35	29.7%	283	4,028	9	14	28	177
Ward Cove	2C	2														
Whale Pass	2C	18	18	100.0%	10	55.6%	12	361	9	50.0%	11	312	0	0	2	23

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Table E-7.–Page 8 of 10.

		Return rate			Subsistence fished halibut		Subsistence halibut harvest		Sport fished halibut		Sport halibut harvest		Lingcod bycatch		Rockfish bycatch	
Rural community	Regulatory area	SHARCs issued[a]	Surveys returned	Percent	Estimated number respondents	Percent of SHARCs	Estimated number fish	Estimated pounds	Estimated number respondents	Percent of SHARCs	Estimated number fish	Estimated pounds	Estimated number respondents	Estimated number fish	Estimated number respondents	Estimated number fish
Wrangell	2C	377	274	72.7%	197	52.3%	1,422	26,991	89	23.7%	190	3,968	8	53	28	223
Subtotal, Area 2C		**4,420**	**3,062**	**69.3%**	**2,161**	**48.9%**	**13,591**	**261,900**	**1,014**	**22.9%**	**3,372**	**54,065**	**385**	**1,271**	**685**	**5,308**
Chenega Bay	3A	7	7	100.0%	5	71.4%	57	826	4	57.1%	46	602	1	2	3	28
Chiniak	3A	3														
Cordova	3A	498	349	70.1%	211	42.4%	1,260	24,049	98	19.6%	241	4,718	15	27	39	184
Karluk	3A	6	6	100.0%	5	83.3%	36	417	0	0.0%	0	0	1	2	4	48
Kodiak	3A	1,552	848	54.6%	827	53.3%	7,895	150,002	515	33.2%	2,419	43,678	92	318	168	2,035
Larsen Bay	3A	6	3	50.0%	0	0.0%	0	0	0	0.0%	0	0	0	0	0	0
Nanwalek	3A	7	4	57.1%	3	42.9%	232	3,738	1	14.3%	1	14	0	0	1	20
Old Harbor	3A	7	4	57.1%	5	71.4%	103	1,715	0	0.0%	0	0	1	6	1	6
Ouzinkie	3A	13	9	69.2%	12	92.3%	67	1,134	5	41.0%	12	168	0	0	1	27
Port Graham	3A	10	6	60.0%	8	76.0%	143	2,155	0	0.0%	0	0	3	19	5	55
Port Lions	3A	11	8	72.7%	10	87.0%	89	1,327	11	100.0%	96	1,320	3	43	1	24
Seldovia	3A	144	108	75.0%	79	54.7%	1,007	14,184	35	24.2%	201	3,037	6	26	7	38
Tatitlek	3A	10	6	60.0%	4	42.0%	26	516	2	16.0%	6	95	3	17	3	42
Yakutat	3A	74	53	71.6%	31	42.3%	293	7,735	12	15.8%	57	1,004	17	61	9	130
Subtotal, Area 3A		**2,348**	**1,414**	**60.2%**	**1,202**	**51.2%**	**11,237**	**208,273**	**682**	**29.1%**	**3,080**	**54,636**	**142**	**521**	**242**	**2,637**
Chignik	3B	1														
Chignik Lagoon	3B	1														
Chignik Lake	3B	1														
Cold Bay	3B	32	27	84.4%	17	52.1%	163	2,866	14	45.1%	23	333	2	39	3	11
False Pass	3B	1														
King Cove	3B	25	15	60.0%	17	66.2%	121	2,337	5	19.4%	3	45	4	5	4	18
Nelson Lagoon	3B	1														
Perryville	3B	1														
Sand Point	3B	15	6	40.0%	8	52.0%	68	1,147	4	24.0%	8	107	0	0	5	99
Subtotal, Area 3B		**78**	**50**	**64.1%**	**42**	**53.9%**	**357**	**6,490**	**23**	**29.3%**	**35**	**485**	**6**	**44**	**12**	**128**
Unalaska	4A	119	76	63.9%	69	58.4%	693	11,456	46	38.6%	208	2,638	4	44	7	283
Subtotal, Area 4A		**119**	**76**	**63.9%**	**69**	**58.4%**	**693**	**11,456**	**46**	**38.6%**	**208**	**2,638**	**4**	**44**	**7**	**283**
Adak	4B	5														
Subtotal, Area 4B		**5**														

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Table E-7.–Page 9 of 10.

		Return rate			Subsistence fished halibut		Subsistence halibut harvest		Sport fished halibut		Sport halibut harvest		Lingcod bycatch		Rockfish bycatch	
Rural community	Regulatory area	SHARCs issued[a]	Surveys returned	Percent	Estimated number respondents	Percent of SHARCs	Estimated number fish	Estimated pounds	Estimated number respondents	Percent of SHARCs	Estimated number fish	Estimated pounds	Estimated number respondents	Estimated number fish	Estimated number respondents	Estimated number fish
St. George Island	4C	1														
Subtotal, Area 4C		**1**														
Aleknagik	4E	2														
Bethel	4E	1														
Chefornak	4E	1														
Dillingham	4E	23	17	73.9%	1	6.1%	0	0	1	6.1%	3	147	0	0	0	0
Egegik	4E	1														
King Salmon	4E	2														
Kongiganak	4E	1														
Manokotak	4E	2														
Naknek	4E	6	2	33.3%	3	41.7%	0	0	0	0.0%	0	0	0	0	0	0
Nightmute	4E	1														
Nome	4E	20	11	55.0%	5	25.5%	38	571	0	0.0%	0	0	0	0	0	0
Port Heiden	4E	3														
Quinhagak	4E	1														
South Naknek	4E	1														
Teller	4E	10	2	20.0%	0	0.0%	0	0	0	0.0%	0	0	0	0	0	0
Togiak	4E	1														
Subtotal, Area 4E		**76**	**40**	**52.6%**	**11**	**14.5%**	**48**	**661**	**1**	**1.8%**	**3**	**147**	**0**	**0**	**0**	**0**
Rural community subtotal	**All**	**7,047**	**4,645**	**65.9%**	**3,489**	**49.5%**	**25,948**	**488,990**	**1,767**	**25.1%**	**6,698**	**111,972**	**537**	**1,880**	**947**	**8,356**

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Table E-7.–Page 10 of 10.

		Return rate			Subsistence fished halibut		Subsistence halibut harvest		Sport fished halibut		Sport halibut harvest		Lingcod bycatch		Rockfish bycatch	
Alaska	Regulatory area	SHARCs issued[a]	Surveys returned	Percent	Estimated number respondents	Percent of SHARCs	Estimated number fish	Estimated pounds	Estimated number respondents	Percent of SHARCs	Estimated number fish	Estimated pounds	Estimated number respondents	Estimated number fish	Estimated number respondents	Estimated number fish
Tribal subtotal	**All**	**3,906**	**2,025**	**51.8%**	**1,502**	**38.5%**	**17,384**	**308,569**	**530**	**13.6%**	**1,953**	**37,268**	**194**	**984**	**376**	**4,496**
Rural community subtotal	**All**	**7,047**	**4,645**	**65.9%**	**3,489**	**49.5%**	**25,948**	**488,990**	**1,767**	**25.1%**	**6,698**	**111,972**	**537**	**1,880**	**947**	**8,356**
Total	**All**	**10,953**	**6,670**	**60.9%**	**4,991**	**45.6%**	**43,332**	**797,560**	**2,297**	**21.0%**	**8,651**	**149,241**	**732**	**2,864**	**1,322**	**12,851**

a. To protect confidentiality, data for tribes and communities with 5 or fewer SHARCs issued are not reported in this table. Subtotals include all tribes and communities. Blank cells indicate redacted data.

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Appendix F.–Project findings summary.

SUBSISTENCE HARVESTS OF PACIFIC HALIBUT IN ALASKA, 2010

Division of Subsistence, Alaska Department of Fish and Game
333 Raspberry Road, Anchorage, AK 99518
January 2012

Through a grant from the National Marine Fisheries Service (NMFS), the Alaska Department of Fish and Game (ADF&G) Division of Subsistence conducted a study to estimate the subsistence harvests of Pacific halibut in Alaska in 2010. The full results of the study appear in the Division's Technical Paper No. 367, "Subsistence Harvests of Pacific Halibut in Alaska, 2010" (January 2012). Key points in the report include the following:

- In May 2003, the NMFS published final federal regulations for a subsistence halibut fishery in Alaska. Residents of 118 rural communities and designated rural areas, and members of 123 tribes are eligible to participate. Fishers must obtain a subsistence halibut registration certificate (SHARC) from NMFS before fishing (www.fakr.noaa.gov/ram/subsistence/halibut.htm; 800-304-4846).
- 2010 was the eighth year in which subsistence halibut fishing took place under these regulations. Information about subsistence halibut harvests in 2003–2009 is reported in Division of Subsistence Technical Papers 288, 304, 320, 333, 342, 348, and 357, respectively.
- To estimate the 2010 harvests, a one-page survey form was mailed to SHARC holders in early 2011 or administered in person. After two mailings and community visits, 6,670 of 10,953 SHARC holders (61%) responded. Participation in the survey was voluntary.
- An estimated 4,991 individuals subsistence fished for halibut in 2010 (Figure 8).
- The estimated subsistence harvest was 43,332 halibut for 797,560 pounds net weight.
- Of this total, 77% was harvested with setline (stationary) gear (longline or skate) and 23% was harvested with hand-operated gear (handline or rod and reel).
- The largest subsistence harvests occurred in Southeast Alaska (Halibut Regulatory Area 2C), at 53% of the total, followed by Southcentral Alaska (Area 3A) at 39%. Table 6 and Figure 17 from the final report give more details on harvests by gear type and area.
- Based on place of residence of SHARC holders, communities with the largest subsistence halibut harvests in 2010 were Kodiak and Sitka (the largest eligible communities) (Figure 22).
- An estimated 12,851 rockfish were harvested by 1,322 fishers in the subsistence halibut fishery in 2010. Most (60%) were harvested in Southeast Alaska.
- An estimated 2,864 lingcod were harvested by 732 fishers in the subsistence halibut fishery in 2010. Most (63%) were harvested in Southeast Alaska.
- Based on preliminary data from the International Pacific Halibut Commission and this study, the estimated halibut removal in Alaska in 2010 was 63.773 million pounds, net weight. Subsistence harvests accounted for 1.3% of this total (Figure 33).
- The report concludes that the project was, overall, a success, with good response rates and a reliable estimate of subsistence halibut harvests. However, analysis suggests that a significant number of fishers may not have renewed their SHARCs. Additional outreach among eligible tribes and rural areas is necessary to maximize enrollment of fishers in the SHARC program.
- The report also recommends that monitoring of the Alaska subsistence halibut harvest continue in order to evaluate trends in the fishery.

For a copy of the full report, go to http://www.adfg.alaska.gov/sf/publications/, or call the Division of Subsistence of ADF&G at 907-267-2353 (Anchorage) or 907-465-4147 (Juneau).

Table 6.–Estimated harvests of halibut in numbers of fish and pounds net (dressed, head-off) weight by regulatory area and subarea, 2010.

			Estimated subsistence harvest by gear type[a]											
			Set hook gear			Hook and line or handline			All gear			Estimated sport harvest		
Subarea	Regulatory area	Number of SHARCs subsistence fished[c]	Estimated number respondents fished	Estimated number halibut harvested	Estimated pounds halibut harvested[b]	Estimated number respondents fished	Estimated number halibut harvested	Estimated pounds halibut harvested[b]	Estimated number respondents fished	Estimated number halibut harvested	Estimated pounds halibut harvested[b]	Estimated number respondents fished	Estimated number halibut harvested	Estimated pounds halibut harvested[b]
Southern Southeast Alaska	2C	1,618	1,373	9,797	207,535	671	2,927	46,831	1,618	12,725	254,366	833	2,928	47,523
Sitka Lamp Area	2C	718	657	3,118	68,532	229	586	8,456	718	3,704	76,988	236	529	8,960
Northern Southeast Alaska	2C	776	686	4,084	77,223	263	1,007	16,241	776	5,091	93,464	296	855	14,880
Subtotal, Area 2C		**3,013**	**2,625**	**16,999**	**353,290**	**1,118**	**4,521**	**71,528**	**3,013**	**21,520**	**424,818**	**1,313**	**4,312**	**71,364**
Yakutat Area	3A	66	53	543	13,296	29	191	4,768	66	734	18,064	15	76	1,198
Prince William Sound	3A	291	260	1,767	35,004	143	364	7,274	291	2,132	42,279	139	361	7,905
Cook Inlet	3A	228	138	2,780	36,870	157	2,607	28,939	228	5,386	65,809	126	579	9,008
Kodiak Island road system	3A	687	564	4,429	82,139	315	1,146	20,928	687	5,575	103,066	450	1,871	35,599
Kodiak Island–Other	3A	592	466	2,854	56,642	285	1,346	26,790	592	4,201	83,432	310	1,055	18,534
Subtotal, Area 3A		**1,631**	**1,283**	**12,374**	**223,951**	**807**	**5,654**	**88,699**	**1,631**	**18,028**	**312,650**	**887**	**3,943**	**72,244**
Chignik Area	3B	42	20	132	2,912	35	183	2,945	42	315	5,857	5	6	103
Lower Alaska Peninsula	3B	130	65	696	8,845	96	514	8,306	130	1,210	17,152	51	143	2,248
Subtotal, Area 3B		**171**	**84**	**829**	**11,757**	**130**	**697**	**11,251**	**171**	**1,525**	**23,009**	**56**	**148**	**2,351**
Eastern Aleutians–East	4A	99	61	429	7,046	66	409	6,297	99	838	13,343	53	217	2,682
Eastern Aleutians–West	4A	8	7	32	665	3	22	540	8	55	1,205	6	8	132
Subtotal, Area 4A		**101**	**62**	**461**	**7,711**	**67**	**431**	**6,837**	**101**	**892**	**14,548**	**57**	**225**	**2,814**
Western Aleutians–East	4B	10	6	22	210	4	14	240	10	36	450	3	21	432
Western Aleutians–Other	4B	0												
Subtotal, Area 4B		**10**	**6**	**22**	**210**	**4**	**14**	**240**	**10**	**36**	**450**	**3**	**21**	**432**
St. George Island	4C	6	5	23	563	5	8	158	6	30	720	0	0	0
St. Paul Island	4C	19	13	468	9,555	6	16	584	19	485	10,139	0	0	0
Subtotal, Area 4C		**25**	**17**	**491**	**10,118**	**11**	**24**	**742**	**25**	**515**	**10,859**	**0**	**0**	**0**
St. Lawrence Island	4D	4	2	32	843	2	6	328	4	38	1,171	0	0	0
Area 4D–Other	4D	0												
Subtotal, Area 4D		**4**	**2**	**32**	**843**	**2**	**6**	**328**	**4**	**38**	**1,171**	**0**	**0**	**0**
Bristol Bay	4E	4	4	0	0	0	0	0	4	0	0	2	2	35
Yukon Delta	4E	60	15	170	2,542	56	571	6,942	60	741	9,484	0	0	0
Norton Sound	4E	6	6	38	571	0	0	0	6	38	571	0	0	0
Kotzebue Sound	4E	0												
Subtotal, Area 4E		**70**	**25**	**208**	**3,113**	**56**	**571**	**6,942**	**70**	**779**	**10,055**	**2**	**2**	**35**
Total, Alaska[c]		**4,991**	**4,071**	**31,416**	**610,992**	**2,183**	**11,916**	**186,567**	**4,991**	**43,332**	**797,560**	**2,297**	**8,651**	**149,241**

Source ADF&G Division of Subsistence, SHARC survey, 2011.

a. "Setline" = longline or skate. "Hand-operated gear" = rod and reel, or handline.

b. Weights given are "net weight." Pounds net (dressed, head off) weight = 75% of round (whole) weight.

c. Because fishers may fish in more than one area, subtotals for regulatory areas and the state total might exceed the sum of the subarea values. Includes subsistence and sport fishing.

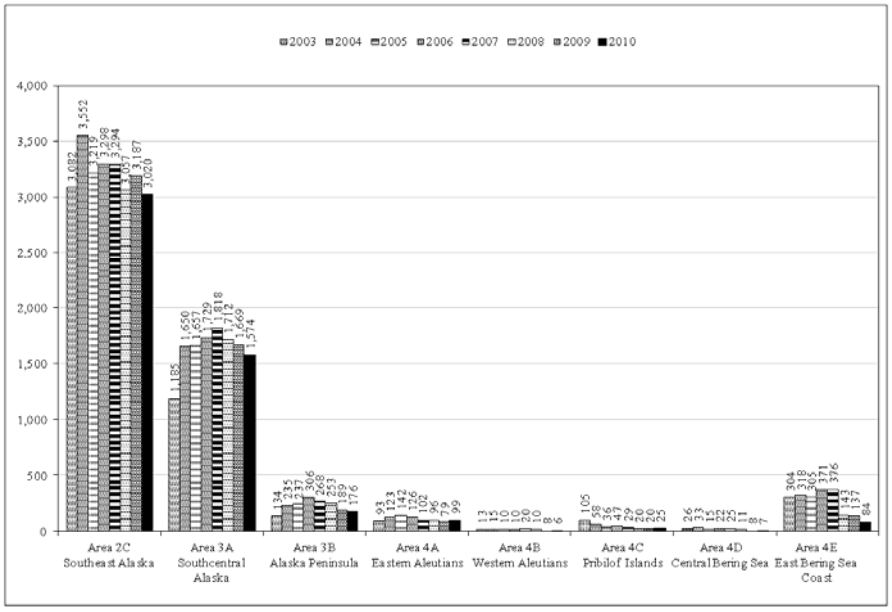

Figure 8.–Estimated number of Alaska subsistence halibut fishers, 2003–2010 by regulatory area of tribe or rural community.

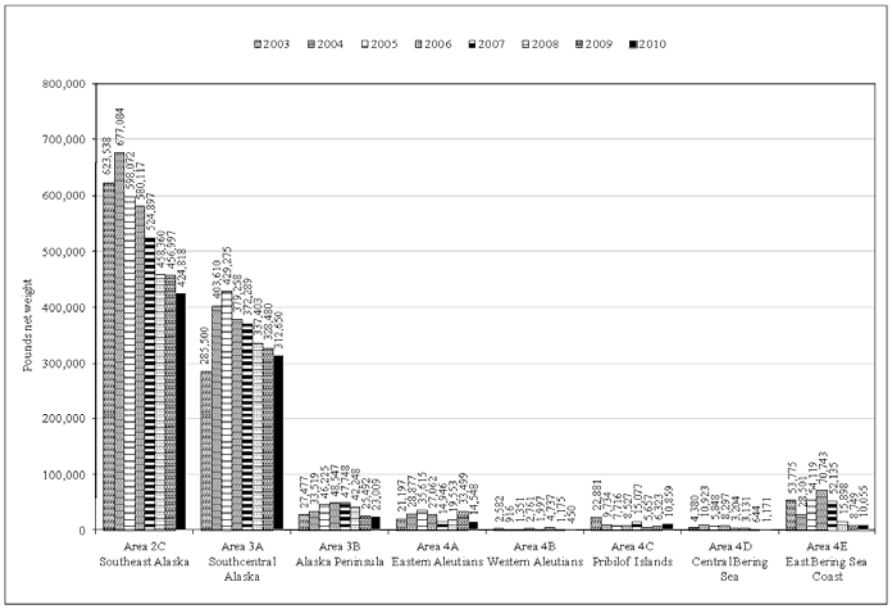

Figure 17.–Estimated subsistence halibut harvests, pounds net weight, by regulatory area fished, 2003–2010.

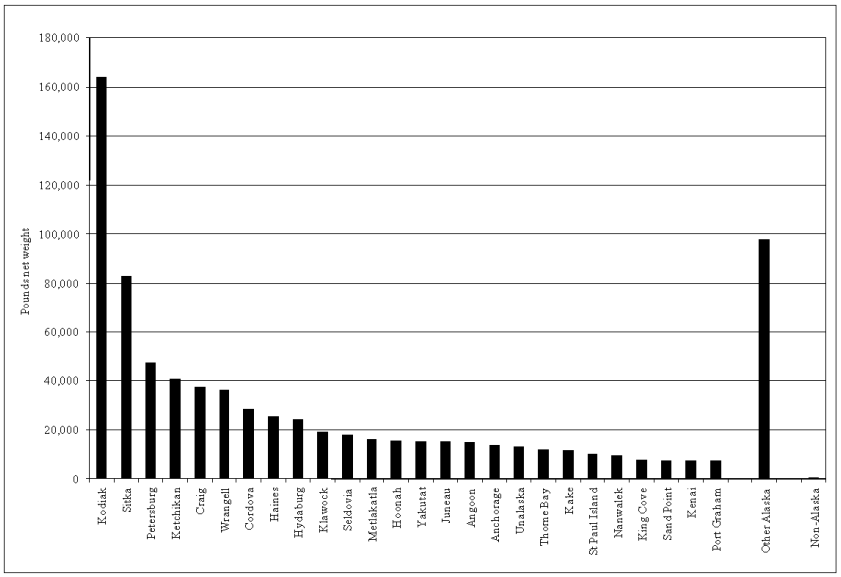

Figure 22.–Alaska subsistence halibut harvests by place of residence, 2010.

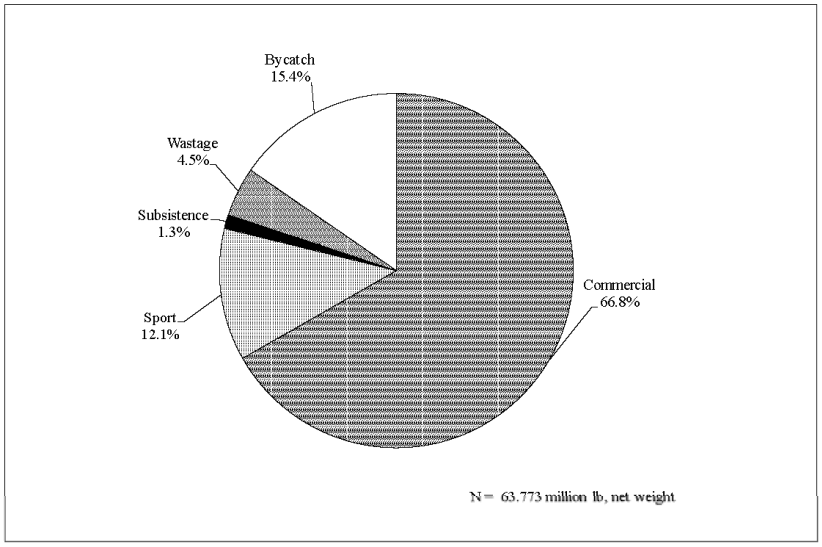

Figure 33.–Halibut removals, Alaska, 2010.

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